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Theory and Practice of Accounts.

APPLIED ECONOMICS AND ORGANIZATION.

By HOMER ST. CLAIR PACE, C. P. A.

LECTURE I.

THE FOUNDATION.

Wealth.

Articles that cost an effort to produce and that satisfy the needs or desires of mankind are known as **wealth.**

For example, wild fruit that is gathered and made available for food, costs an effort and satisfies a need, and is an article of wealth.

The locomotive, a machine that aids in the transportation of things and persons, is a more complicated instance. Its manufacture involves the gathering of natural products, the mental effort of the inventor, the physical labor of the workman and mechanic, and the work of the trader in making the various exchanges.

Air, on the other hand, while supplying the most urgent of necessities, is common to all without effort. It has, therefore, under usual conditions no economic value, and is not wealth.

The articles that constitute wealth vary in their character from those that satisfy the primary needs of food, clothing and shelter to those that satisfy the desire for adornment or other luxury, without regard to actual needs.

The Right of Property.

The ownership of the articles of wealth, it is believed, was first held in common by the members of the family or tribe. Community ownership early gave way to individual ownership. With the latter there came into existence the **right of property,** which is the right of one individual to the possession, use and enjoyment of something, in nearly all cases an article of wealth, to the total exclusion of every other person.

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Inasmuch as the use of certain articles of wealth is essential to existence, and the possession of others conduces to comfort and pleasure, the determination of the respective property rights of individuals is a matter of interest and consequence.

Units of Measurement.

The exercise of exclusive rights over property presupposes an interest in the extent of the ownership. The savage who claimed the ownership of his weapons undoubtedly preferred as many as he could conveniently use to a less number, insufficient for his needs.

One of the chief incentives for an enumeration, or count, is thus found, and it is supplied by the method of numbering—one, two, three, etc.—that is used to some extent by all races, civilized or uncivilized. In this way, an idea of the number or extent of things is expressed.

Many articles, in their nature, lend themselves conveniently to measurement in mere numbers. Thus, it may be said that there are forty cars in the train, and that there are ten trains a day for six days of the week.

Numbers are divided into convenient groupings, as for example, gross or score, and by custom the terms are applied to certain things, as a dozen of eggs or a gross of pens. Another common grouping is into ten, or multiples thereof.

Other things are measured more conveniently by a special unit. Thus, wheat is measured by the bushel, fluids by the gallon, coal by the ton and cloth by the yard. Numbers are relied upon, however, to convey an idea of the extent of the units, and thus it is said that ten tons of coal will supply fuel for a house, or that forty bushels of wheat are contained in the load.

It is obviously inconvenient to state an aggregate ownership of the articles of wealth in the various units of measurement, for it would be necessary to state it in bushels, yards, gallons, etc. It was done in this way at one time, however, and there are records in existence that show that taxes in ancient governments were levied and paid in terms of quantity measurement, such as measures of grain.

For the aggregate measurement a common denominator is required, in which all property rights may be stated. Such a unit has been in use for thousands of years, and is known as **money.** It is a medium by which wealth, and the effort expended to produce wealth, may be measured.

Money is itself divided into convenient units, known variously as dollars, pounds, francs, etc., and they are expressed in numbers, which are essential to all enumerations or counts.

Each article of wealth has a worth, known as **value,** that may be expressed in the required number of units of money. Thus, four bushels of wheat may be valued at one dollar a bushel, or four dollars, while a cord of wood may be valued at three dollars. The owner of both possesses values to the extent of seven dollars. It is obvious that the articles have been reduced to a common basis, comparable with all other articles of value.

Money serves another purpose in that it is a token of effort expended, exchangeable for the products of other effort. By its use, the producer may sell his product, taking an agreed value in money, which can be held in convenient form until he finds a seller of those things which he desires. A new exchange is then made, the seller taking his pay in money, which he in turn can convert into goods, and so on.

Prerequisites.

The foregoing, that is to say, wealth, the right of property and a unit of measurement, are necessary prerequisites to the development and use of a scientific method of stating the extent of property rights, and determining their increase and decrease.

Wealth supplies the subject matter, or articles, the value of which is to be stated.

The right of property, by which one individual has exclusive rights in the things that are essential to his existence and that satisfy his tastes, is accompanied by a desire for a knowledge of the extent of the ownership, and its fluctuations.

The unit of measurement, money, as applied to the value or worth of property rights, provides a common measure that is essential to the comprehension of the extent of ownership.

Definitions and Distinctions.

Accounting is the science of recording and stating facts in relation to the acquisition, production, conservation and transfer of property rights or values.

Accounting has a **theory,** or body of underlying principles, upon which is based a **practice,** involving the construction and use of all records, statements and devices needed to record and state values and their transfer.

Auditing is the verification of the accounting record that, presumably, is made in accordance with the theory and practice of accounting.

Law, so far as accounting is concerned, supplies all necessary rules and regulations in relation to the acquisition and disposition of property values, and all transactions incident thereto.

Accountancy is a profession, the practice of which involves a general academic education and a special or technical training in Accounting, Auditing and Law.

The members of the profession of Accountancy, known as **accountants,** offer their services to the public in the construction, installation and operation of accounting systems, the presentation of accounting facts, the verification of accounting records, and in such other matters as their special training may justify.

The object of these lectures is to present the theory and practice of Accounting, as above defined, in its fundamental aspects. The lectures provide the basic technical training for the practice of Accountancy and for private employment upon accounting records.

Accounting Objects.

The science of accounting has two principal and well defined objects, namely:

1. The determination, at any desired time, of the financial position of an individual or enterprise, that is, the possession of values and the liability for values.

2. The determination, for any period of elapsed time, of the increase or decrease of values of an individual or enterprise.

Accounting Essentials.

Three essentials must be met in an accounting record in order that the objects of accounting may be fully secured, namely:

1. **Original Position.** The financial position of the individual or enterprise, that is, the possession of values and the liability for values, at the beginning of the accounting period, must be determined and recorded.

This meets, for that moment of time, the first object of accounting, and provides a statement against which comparisons may be made with subsequent financial statements.

2. **Chronological Record.** A record of the financial transactions subsequent to the time of starting, in the order of dates, must be made.

This provides a record of the acquisition and transfer of values that affect the original position, and supplies material for achieving the second object of accounting.

3. **Rest.** There must be a rest, or time at which the accounting record momentarily ceases, for the determination of the financial position.

This provides a statement that may be compared with the statement showing the original position, and, if the second essential is properly

met, the two positions may be reconciled by a tracing of the transactions affecting values.

The time, usually a year, that elapses between the two financial positions and during which the chronological record is made, is known as the **accounting period.**

The **calendar** year, that is, the period from January 1st to December 31st, inclusive, is the ordinary accounting period.

A **fiscal** year may be any consecutive twelve-months' period, such as the twelve-months' period from July 1st to June 30, inclusive, that constitutes the business year adopted by railroads.

The accounting period is usually the same as the fiscal year, irrespective of whether the latter is for the calendar year or some other twelve-months' business period.

Bookkeeping.

The systematic and chronological recording of facts as to the ownership and transfer of values is known as **bookkeeping,** and is the medium through which accounting results are obtained.

The term **accounting** is more comprehensive than the term **bookkeeping,** as there are several systematic records for recording financial facts, any of which may be called bookkeeping. The term accounting embraces all methods of bookkeeping. The two methods in common use are known as **Double Entry** and **Single Entry.**

The system of Double Entry bookkeeping, so far as can be traced, appeared in Venice and Genoa in the fourteenth century, and was known as the Method of Venice. More than a century later, in 1494, a monk, Luca Paciola, published the first treatise upon Double Entry bookkeeping. The first English work upon the subject, by Hugh Oldcastle, a schoolmaster, was published in London in 1543. Several fairly complete works appeared in England and America early in the nineteenth century.

The system that Paciola set forth is now the recognized standard of bookkeeping. It remains unchanged in principle, and it has been changed in practice only to save labor and to meet the different conditions under which business is now transacted.

The term Single Entry has a restricted meaning, as will be explained in a subsequent lecture, although under Single Entry bookkeeping may be grouped all the methods and devices, other than Double Entry bookkeeping, by which the attempt is made to record values and the transfer of values.

Single Entry has gradually given way to Double Entry until now it is rarely used except in small retail undertakings.

Double Entry Theory.

The system of Double Entry has become the standard of bookkeeping because, by its use, the objects of accounting are accomplished with the least effort.

Double Entry bookkeeping is based upon the theory of a natural law of compensation or balance. In nature there are many instances of a division of things into two parts, effecting a balance or equilibrium. For example, there are two poles, north and south, there is an east and a west, day and night, male and female, etc.

This natural law of balance or equilibrium supplies the fundamental principle of Double Entry bookkeeping. Considering the first object of accounting, that is, the statement of the ownership of values, it will be seen that the theory of balance, or equilibrium, can be applied, for the total of such net values must equal the worth of the owner. Thus, in the case of an individual possessing values to the extent of ten thousand dollars, the values and the worth of the owner constitute a balance or equilibrium, as follows:

Values..... $10,000 Worth of Owner.. $10,000

The application of the principal to transactions subsequent to the statement of the initial ownership will be considered later.

Double Entry Definitions.

In accounting, things of value owned, and the right to receive values, are known as **assets.** They may be classified for the purpose of accounting as follows:

1. **Real property,** that is, land and all buildings and fixtures that are permanently attached to the land;

2. **Personal property,** including all things of value other than real property, such as merchandise, money, and the right to receive values, such as accounts receivable, or amounts due from others known as **debtors.**

The debts due to others, known as **creditors,** in accounting are termed **liabilities.** Liabilities present an element the inverse, or opposite, of assets.

The net worth of an individual is the amount of his assets, less the amount of his liabilities, and is known in accounting as **capital.** It is the amount by which the assets exceed the liabilities.

In the economic sense, an individual's capital is the total, or gross amount of assets he possesses. Thus, if the total assets in a business

amount to $25,000, the economic capital is $25,000, although there may be $10,000 of liabilities. In such a case, however, the accounting capital would be only $15,000.

Throughout all accounting, unless otherwise specified, the term capital is used in the latter sense, and means the excess of asset values over liabilities.

The assets of a **trader,** or merchant, to illustrate the definitions given, are $20,000 and his liabilities are $10,000. The accounting capital, therefore, $10,000, is the amount of the excess of assets over liabilities.

It is obvious that assets=liabilities+capital. The condition may be displayed in a form similar to the one previously given, as follows:

Assets.....	$20,000	Liabilities.....	$10,000
		Capital (to balance).....	10,000
	$20,000		$20,000

The initial balance, or equilibrium, necessary to open double entry books of account when the assets exceed the liabilities, can always be established in this manner. No matter into how many items the assets and liabilities may be divided, the excess of the total amount of the assets over the total amount of the liabilities is the capital, and the amount necessary to establish a balance.

Original Position.

In opening double entry books of account it is necessary to determine the first essential of accounting, or original position.

The assets and liabilities are inventoried and displayed in opposition, in the manner before indicated. Assets are carried to the left side of the statement, and this position to the left, or **debit,** side is maintained for assets throughout all double entry. The liabilities are carried to the right, or **credit,** side, and always thereafter appear on the credit side.

The capital, while not a liability in the sense that it is an amount due a creditor, is an amount showing the accountability of the business to the owner, subject to the payment of the liabilities. It must appear with a credit balance to effect a balance or equilibrium.

The initial statement is variously known as a **Statement of Assets and Liabilities, Statement of Affairs,** and **Balance Sheet.** The two latter terms are perhaps best reserved for other statements, to be described later. In the construction of such a statement, let it be assumed that John Doe started in business January 2, 1902, with $5,000 in cash and

$9,000 in merchandise values, with no liabilities. The condition would be displayed as follows:

JOHN DOE.

STATEMENT OF ASSETS AND LIABILITIES AS AT JANUARY 2, 1902.

ASSETS.		CAPITAL.	
Cash	$5,000	John Doe, Capital	$14,000
Merchandise	9,000		
	$14,000		$14,000

As an illustration of a more complicated case, Richard Roe started in business July 1, 1902, with $1,000 in cash, $2,500 in accounts receivable, real estate valued at $15,000, upon which there was a bond and mortgage (liability) for $8,000. There was six months' interest at six per cent. due on the mortgage.

The procedure is to list the assets and liabilities and carry in Capital to balance, thus:

RICHARD ROE.

STATEMENT OF ASSETS AND LIABILITIES AS AT JULY 1, 1902.

ASSETS.		LIABILITIES.	
Cash	$1,000	Bond & Mortgage	$8,000
Accounts Receivable (as per Schedule)	2,500	Accrued Interest	240
Real Estate	15,000		
Total Assets	$18,500	Total Liabilities	$8,240
		Capital	10,260
	$18,500		$18,500

The principle is the same in all cases. The object is to find the net capital or investment by listing all assets and all liabilities as they stand on the day the statement is dated.

Interest that is accrued, but not due, is as much a liability as the bond itself, for the bond may not be due to be paid for several years. Therefore, accrued interest and all similar items, whether assets or liabilities, must be taken into the statement.

In the rare case of an excess of liabilities over assets, the amount necessary to effect a balance must be carried to the left side, as a **deficit** or **deficiency.** It constitutes an element the inverse of capital, or an accountability for values beyond those owned.

The Journal.

The position of the individual or undertaking having been thus ascertained and a statement constructed on the double entry principle of making the total debit items equal the total credit items, the actual opening of the books of account, by the transfer of facts, is in order.

In double entry bookkeeping, the **Journal,** in one form or another, is the book in which the original record of the business is kept from day to day, including the statement of the original assets, liabilities and capital.

The most common form of Journal is a bound book, ruled, beginning at the left, with columns for date, a wide column for names of accounts, a narrow column for ledger page or folio (abbreviated L. F.) to which posting is made, and two money columns, one for debits and one for credits. The ordinary ruling is, therefore, substantially as follows:

(Month)	(Day)	(Names of Accounts)	L. F.	(Debit Money Column)	(Credit Money Column)

In transferring the facts from the Statement of Assets and Liabilities the same relative positions are maintained in the money columns, the assets being carried to the left, or debit, column, and the liabilities and capital to the right, or credit, column.

Upon the basis of the first Statement of Assets and Liabilities of John Doe, and following the rule stated, the opening Journal entry would be as follows:

NEW YORK, January, 1902.

		2			
		CASH.....		$5,000	
		MERCHANDISE.....		9,000	
		To JOHN DOE, Capital.....			$14,000
		For assets (no liabilities) of John Doe, who this day engages in the business of.....			

It is obvious that it is a reproduction of the Statement of Assets and Liabilities, except that the money columns are adjoining.

The above entry means that Cash is debtor for $5,000, that is, Cash is debited with it. The meaning of this is clearer when one thinks of the cash as turned over to the cashier or placed in a drawer, in which case the cashier or the drawer is accountable, or debtor, for the amount and should be charged with it.

The entry also means that Merchandise is likewise chargeable with $9,000 of value and must account therefor.

The entry means further that John Doe is to be credited with $14,000, for, considering the business as a thing apart from himself, he should receive credit for the capital he contributes. The credit indicates the accountability of the business to the proprietor.

The old way of expressing the entry would be **Cash, Dr., Merchandise, Dr., To John Doe, Cr.** The **Dr.** and **Cr.** abbreviations are now dispensed with, but the **To** remains in use, so that the usual form is as given above.

The best method is to place the name of the city or town in which the business is located, with the month and year, at the head of the Journal page, and the day of the month in the center immediately above the entry, as shown in the foregoing illustration. This obviates the necessity of using the column to the left of the page for date, which can be utilized for some other purpose.

Considering the more complicated condition shown in the second example, the opening entry would be as follows:

NEW YORK, July, 1902.

		1			
		CASH.....		$1,000	
		ACCOUNTS RECEIVABLE.....		2,500	
		REAL ESTATE.....		15,000	
		To BOND & MORTGAGE.....			$8,000
		" ACCRUED INTEREST....			240
		" RICHARD ROE, CAPITAL			10,260
		For assets, liabilities and capital of Richard Roe, who this day engages in the business of.....			

In the foregoing, Cash, Accounts Receivable and Real Estate are accountable for the respective amounts with which they are debited. An account would be opened with each debtor, but here, in the absence of details, Accounts Receivable are treated as one account.

The liabilities, Bond & Mortgage, and Accrued Interest, are credited with the respective amounts to show the liability of the business on account of each. The Capital Account is treated as in the foregoing illustration.

The form will become impressed with subsequent work. It is here important to understand that assets are carried to the debit column, and liabilities and capital to the credit column.

In Journal illustrations hereafter given, no rulings will be shown, but merely the accounts affected, which will be sufficient to show the principles of debit and credit.

In each entry the total placed in the debit column must equal the total placed in the credit column, to preserve the equilibrium of the work.

The Ledger.

Not only the opening entries, but every subsequent transaction, might be recorded in the Journal, and a complete record of the business kept in this way, as will be seen as the system is unfolded.

It is easily seen, however, that it would be necessary to classify or index the record in such a way that all entries bearing upon a particular

subject, as, for instance, Cash, could be ascertained, viewed and considered as a whole. Thus, if the amounts for which Cash is accountable, are recorded by debits, a summation of such debits is necessary to disclose the total accountability. Without such an arrangement of items, the Journal record would give little or no idea of the facts of the business.

This classification of facts is made by carrying or **posting** the Journal entries to **accounts,** in a book called the **Ledger,** each account having a debit and credit side. Journal debits are posted to the debit of Ledger accounts, and Journal credits are posted to the credit of Ledger accounts.

A Ledger account is a collection, under a distinctive caption, in a book called a Ledger, of the debits and credits pertaining to a particular person or subject.

The Ledger ruling resembles the Journal ruling in that there are debit and credit money columns, although the arrangement, in the ordinary Ledger ruling, is different, and more nearly resembles the form shown for the Statement of Assets and Liabilities.

Starting from the extreme left of the page, the ruling is, columns for month and day of month, column for explanations, column for Journal folio, that is, page of Journal from which amount is carried, and money column for debit items. This consumes the left half of the page, and the right half is ruled in a similar manner, the money column being for credit items, thus:

(Month)	(Day)	(Explanations)	F.	(Debit Money Column)	(Month)	(Day)	(Explanations)	F.	(Credit Money Column)

The Ledger is the book in which the principal facts recorded in the Journal are collected in accounts, each account with the caption, and the debits and credits appertaining to that account, as determined and shown in the original record in the Journal.

The total debit of each Journal entry being the same as the total credit, it follows that if the entries are correctly posted to the Ledger

accounts, the total debits of the Ledger accounts will always equal the total credits.

By ascertaining whether the debits and credits of the Ledger accounts are in balance, a valuable check is provided upon the accuracy of the postings.

In the first example of Journal entries given, three accounts would have to be opened in the Ledger, and after posting, they would appear as follows:

CASH.

1902 Jan.	2	To John Doe, Capital....	1	$5,000					

MERCHANDISE.

1902 Jan.	2	To John Doe, Capital....	1	$9,000					

JOHN DOE, CAPITAL.

					1902 Jan.	2	By Sundries .	1	$14,000

The explanation in the Cash Account **To John Doe, Capital,** means that Cash was debtor **To John Doe, Capital,** credit. It names the account that received the credit, so that, by glancing down the debit column of the Cash Account, the accounts that received the various credits can be determined, without reference to the Journal. The same explanation applies to the Merchandise Account.

The **By Sundries** in John Doe, Capital Account, means that more than one item (Cash and Merchandise) was debtor to that amount. In case one account only were debited, it would be named, but if more than one account is debited, it is customary to use the term **Sundries.**

The date and folio column in the illustrative Ledger accounts are self-explanatory.

The Basic Books.

The Journal and Ledger are the two essential books in double entry bookkeeping. By their use, every necessary record and classification can be made.

A complete record may, in fact, be maintained in either alone, but on account of lack of classification, as explained, the Journal without the Ledger is inadequate.

On the other hand, debits and credits may be made directly to Ledger accounts in the first instance, without passing through a Journal. Such a procedure, however, does not afford a record that may be considered in chronological order; it burdens the Ledger accounts with a mass of detail not needed in the classification of transactions, and, in general, opens the way to omissions and errors.

Practically, both Journal and Ledger are necessary for successful work in double entry bookkeeping.

As all other books are but forms of the Journal and Ledger, a thorough mastery of the principles of these books will materially simplify the further consideration of the double entry bookkeeping fabric, which rests upon the few principles and three essentials that have been outlined.

THEORY AND PRACTICE OF ACCOUNTS.

Applied Economics and Organization.

LECTURE I.

1. Define *wealth, property, capital, posting, ledger account.*

2. State and explain the two principal purposes for which accounts are kept.—Question from C. P. A. Examination.

3. Describe the entries necessary to open a set of double entry books.—Question from C. P. A. Examination.

4–5. *Proposition.* G. W. Blanchard had been carrying on a retail merchandise business without adequate accounts and desired to prepare a statement showing his assets, liabilities and capital as a basis on which to open double entry books of account. On February 1, 1902, he determined the following facts as to assets and liabilities: merchandise on hand, $6,500; accounts receivable, $1,450; accounts payable, $975; cash in bank, $720; cash on hand, $162. Prepare necessary statement and journal entry to open the new books.

SUPPLEMENTAL QUESTIONS.

1. Define *barter, deficiency, accounting, money, asset, liability.*

2. State the prerequisites and essentials of a satisfactory accounting system. What is the usual accounting period? What is a fiscal, as distinguished from a calendar, year?

3. Define journalizing in its broadest sense.—Question from C. P. A. Examination.

Supplemental Questions to be answered in writing by Extension students (those not attending Resident school class sessions). Students attending Resident school should study Supplemental Questions as preparation for class discussions.

Theory and Practice of Accounts.

APPLIED ECONOMICS AND ORGANIZATION.

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LECTURE II.

THE RECORD OF TRANSACTIONS.

General View.

The object of the commercial undertaking, under ordinary circumstances, is to make a profit. In a trading concern the effort to secure such profit takes the form of buying at one price and selling at a higher price, the difference in the buying and selling prices, or **Gross Profit,** as it is usually termed, being large enough, presumably, to cover all the expenses of the undertaking and to leave a balance, which is known as **Net Profit.**

In the illustrative Statements of Assets and Liabilities that have been considered, the Capital Account measures the net asset value, or net worth, of the undertaking.

Especially in the first example, in which there are no outside liabilities, but merely assets on the left side, balanced by the Capital Account on the opposite side, it is apparent that the Capital Account is but a measurement of the values that exist **contra,** or opposite.

This is always the function of the Capital Account—it indicates to the proprietor the amount of his net investment in the business, or, as some choose to express it, it shows the liability or accountability of the business to the proprietor.

If profits are earned by exchanging assets for assets of greater value, and the profit is not withdrawn from the business, there must be an increase in the capital or investment to the extent of such profit.

If expenses are incurred in making such turnover, they must be deducted from the Gross Profit in order to arrive at the net increase in the investment or capital.

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Stating the proposition arithmetically, if the initial Capital was		$900.00
and the Gross Profit is	$200.00	
by deducting the expenses incurred in securing such Gross Profit	75.00	
we arrive at the Net Profit		125.00
which, if left in the business, would increase the Capital to		$1025.00

Stating the same proposition from the Double Entry accounting viewpoint, by raising a Capital Account, it is as follows:

CAPITAL ACCOUNT.

To Expenses	$75.00	By Balance	$900.00
" *Balance down*	1025.00	" Gross Profit	200.00
	$1100.00		$1100.00
		By Balance	$1025.00

It thus appears that, if losses and expenses are charged to Capital Account, and profits are credited to Capital Account, and there are no withdrawals by the proprietor, the balance of the Capital Account will be larger or smaller just as the business makes a net profit or loss.

Instead of making such charges and credits directly to the Capital Account, it is customary to raise intermediate, or temporary, accounts, that hold the items of expense and profit in suspense until the close of the interval of time, usually one year, which is known as the **accounting period.**

Scrutinizing more closely the items of expense and loss, it is found that they are either paid by turning over an asset as where rent is paid by cash, or they are taken into the accounts by setting up a liability, as where rent is due to another and is credited to an account opened in his name.

It follows that such expenses and losses must be debited, either to take the place of the asset which is surrendered and therefore credited, or to balance the liability which is credited, as will be more fully illustrated later.

Profits, on the other hand, consist of increased assets and are **measured** by credit balances.

Thus, if the business has $500 of merchandise, the Merchandise Account will be debited with that amount, and if it should be sold for cash for $600, Cash Account would be debited with the $600 received and Merchandise Account would be credited, leaving Merchandise Account with a **credit balance** of $100.

That is, a profit of $100 has been earned, which consists of cash, and it is measured by the credit balance of the Merchandise Account.

Assets and expenses (including losses) being debited, and liabilities, capital and profits being credited, it follows that an account with a debit balance is either an asset or an expense, or a combination of the two, and than an account with a credit balance is either a liability, capital or a profit or some combination of these elements.

By the method of raising intermediate accounts, instead of carrying items of profit and loss directly to Capital, all the items of a certain kind are brought together in an account. For example, all payments on account of salaries are charged to Salaries Account.

This classification of expenses and profits is of use in the conduct of the business during the accounting period through comparisons which can be made with similar classifications of former periods, and it is of value in the preparation of analytical statements at the close of the accounting period.

At the completion of the period the balances of the **Nominal** accounts, as they are termed, carrying profit and loss elements, are brought together, usually by Journal entries, in a ledger account called a **Profit & Loss Account.**

It is necessary to bring all losses and expenses to the Profit & Loss Account by charging the latter and crediting the particular expense account, thus:

PROFIT & LOSS.....
To SALARIES.....

It is necessary to bring all profits to the Profit & Loss Account by crediting the latter and charging the particular profit account, thus:

INTEREST (received).....
To PROFIT & LOSS.....

The construction of a Profit & Loss Account is merely a gathering in one Ledger account of the items of profits and losses, offsetting them against each other.

If the total of the profit items exceeds the total of the loss items,

the excess, being a credit balance and measuring increased asset value in the business, is carried to Capital Account, thus:

PROFIT & LOSS.....
To CAPITAL.....

The foregoing entry balances the Profit & Loss Account, and clears the books, at that particular moment, of all Nominal accounts. If a loss is incurred, it is carried to Capital by a debit entry and Profit & Loss Account is credited to balance.

If drawings had been made by the proprietor during the accounting period, they would have been charged, properly, to a **Drawing Account** or **Personal Account** opened in his name, the balance of the Profit & Loss Account would first have been taken to such account, and the balance, measuring the net increase or decrease of investment in the business, would have been carried to the Capital Account.

Instead of raising a separate **Drawing Account** and charging it with withdrawals, they are sometimes charged directly to Capital Account. The method of keeping withdrawals in a distinct account, and carrying the amount of the net increase or decrease of capital to the Capital Account and thereby showing the net result without a multiplicity of items, is preferable.

This view of the Profit & Loss Account is now given in order to show its relation to the Nominal accounts, and that it is merely a consolidation of such elements and the gateway through which they find their way to the Capital Account.

It is important that the general plan be grasped by the student in order that the goal to be attained, and the general means of reaching it, may be clearly in mind before, as well as during, the consideration of the details which is about to be undertaken.

Therefore, to reiterate, the books are opened with the assets on the debit side, and the liabilities and Capital on the credit side, effecting an **equilibrium,** or balance.

During the transaction of the business for the period, Nominal, or temporary, accounts are raised, to which expenses are charged and to which profits are credited, and at the end of the period these accounts are closed into one, and the net profit or loss is offset against drawings in the Drawing Account, and the balance is carried to Capital Account, and marks the increase or decrease of net asset value in the business as the result of the transactions for the fiscal period.

After the Nominal accounts are closed out, the books, so far as the nature of the accounts is concerned, are in the same condition as when

opened—assets appearing as debits to accounts, and liabilities and Capital as credits to accounts.

Real, Personal and Nominal Accounts.

The temporary accounts, raised in the course of the accounting period, to be offset and closed out, are known as **Nominal** accounts, and their nature has already been sufficiently noted.

As distinguished from Nominal accounts, those accounts representing real facts as to the ownership of values, such as Cash, Real Estate, Machinery, Plant, etc., and the liability for values, such as Accounts Payable, are known as **Real** accounts.

Accounts with persons, either with **debtors,** those indebted to the business, or with **creditors,** those to whom the business is indebted, are also known as **Personal** accounts.

Personal accounts are, in fact, Real accounts, although they are often given the distinctive classification.

Another classification of accounts is into **Personal** and **Impersonal,** the former being those with persons, and the latter all other accounts. This classification seems to be illogical, because the Impersonal accounts include those representing asset values, such as Real Estate, and those representing nominal elements, such as Rent, thus associating elements of entirely dissimilar character.

The most logical division would seem to be into Real accounts, subdivided into accounts with persons and accounts with things, and Nominal accounts.

Upon the opening of a set of books only Real accounts ordinarily appear, but upon the transaction of business Nominal accounts are raised, and remain until closed out at the end of the accounting period.

Purchases.

The business of a trading concern provides transactions that illustrate the principles of accounting, and although a comprehensive theoretical view of the transactions of an accounting period has been given, it will now be reinforced by entries covering specific transactions.

The first procedure in a trading business, is to buy stock. It may be bought for cash, in which case Merchandise would be charged and Cash credited, the following Journal entry covering the principles of debit and credit:

MERCHANDISE.....
To CASH.....

That is, the transaction is merely an exchange of an asset of one kind for an asset of another kind, and so it appears in the books as raising

an asset by a charge to Merchandise, and the cutting down of another asset by a credit of an equal amount to Cash.

If the purchase is made upon credit, Merchandise would be debited and the person or concern from whom the purchase is made would be credited, as follows:

MERCHANDISE.....
To WILLIAM JONES.....

That is, the transaction amounts to obtaining an asset by incurring a liability of an equal amount, and it is carried out in the books by charging the assets and crediting the person or concern to whom the business is indebted for the asset.

In either event, whether one asset be raised and another cut down by a like amount, or whether an asset be obtained and a liability of a like amount be incurred, the net condition of capital is not changed.

Sales.

Sales, in the natural order of things, follow purchases. Like purchases, they may be for cash or on time. If for cash, Cash is charged and Merchandise credited, with the amount of the sale, thus:

CASH.....
To MERCHANDISE.....

for Cash should be charged, that is, it is accountable for all cash received, and Merchandise, having been charged with the cost of goods, should be credited with the amount received for goods which have been sold and which have passed out of stock.

If the sale is on credit, the person to whom the goods are sold should be charged in an account opened in his name, and a credit should be made to Merchandise the same as in the foregoing illustration, thus:

ROBERT GORDON.....
To MERCHANDISE.....

for the business now has an asset in the **account receivable.**

Returned Purchases and Returned Sales.

Goods are sometimes returned to the one from whom they were bought and are then known as **Returned Purchases.** The one to whom the return is made should be charged, and Merchandise credited, thus:

WILLIAM JONES.....
To MERCHANDISE.....

for, to the extent of the return, it is the extinction of a liability by the turning over of an asset.

In like manner, customers of the business may return goods, and such returns are known as **Returned Sales.** In such cases Merchandise is charged and the customer credited with the amount, thus:

MERCHANDISE.....
To ROBERT GORDON.....

for, to the extent of the return, it reduces an asset and restores the Merchandise Account to its former position.

Division of Merchandise Account.

In the accounts of traders, a **Merchandise Account** is usually maintained, to which purchases are charged, sales credited, returned purchases credited and returned sales charged, in the manner which has been set forth.

A better and more modern method is to divide the Merchandise Account into two ledger accounts, viz., **Purchases,** to which purchases are charged and returned purchases credited; and **Sales,** to which sales are credited and returned sales charged, the Purchases Account showing the net purchases, and the Sales Account the net sales.

Or, if the volume of business justifies it, a further division may be made by opening a **Returned Purchases Account** and a **Returned Sales Account.**

The Merchandise Account is a consolidation of these various elements, and while it theoretically gives the same result as the division into separate accounts, practically the amount of net sales and net purchases cannot be determined, from time to time, as readily; the comparison of purchases and sales with previous periods is difficult; the Merchandise Account in practice frequently becomes the resting place of many items which are not otherwise easily disposed of; and, in short, it falls short of giving the satisfaction that is obtained by making the division into distinct Purchases and Sales accounts.

Profit.

If the selling price differs from the purchase price, the new element of profit or loss enters into the accounts, for in that case the selling is not exchanging one asset for another of equal value, but for one of a greater or less value. Ordinarily, of course, the exchange is for an asset of a greater value, and a profit is made.

If the accounts are opened with Purchases and Sales accounts, and all the goods on hand are sold, there will be on the books a Purchases Account, debited with the cost of the goods, and a Sales Account, credited

with the selling price of the goods. It is a simple case of cost, as shown in the Purchases Account, as against proceeds, as shown in the Sales Account. The excess of the proceeds over the cost is the Gross Profit made in the trading transactions.

If no expenses were incurred in these transactions, and no drawings made by the proprietor, the excess of the Sales Account over the Purchases Account would be the net increase of assets on account of the trading operations, to be finally taken into the Capital Account.

In practice there would be expense items to be charged against the Gross Profit, but this does not change the principle in the least.

Practically, it seldom happens that the goods are completely sold out, for the purchases and sales go on continually. But if the goods on hand are inventoried at cost prices, and the amount deducted from the cost of the goods as shown by the Purchases Account, it is evident that the balance will be the cost of the goods sold.

To express it tersely, cost of goods bought, less cost of goods on hand, equals cost of goods which have passed out of stock.

This being true, it is easy to arrive at cost against selling price, as was done in the theoretical case where the goods were all sold. The exact method of doing this will be considered in the next lecture.

Division of Expenses into Accounts.

The Nominal accounts raised in the course of the business have to do principally with the items of expense, and just how many accounts shall be raised is a matter dependent upon the particular business and the requirements of its management.

In any event, the principal items of expense, such as wages, rent, insurance, freight, cartage, etc., are collected in distinct accounts.

When such expenses are paid in cash, the proper account is charged and Cash credited, and if not paid in cash, the proper account is charged and the party to whom the undertaking is liable for the amount receives the credit.

Thus, if it is a cash payment for rent, the entry is:

RENT.....
To CASH.....

for an expense is incurred, which should be charged, and it is met by cutting down the asset of cash, which, therefore, should be reduced by the credit.

If it happens that the rent is due, and through shortage of cash, or otherwise, it is not paid in cash, the condition can be shown by charging

the expense account, Rent, as before, and crediting the person or concern to whom the rent is payable, thus:

RENT.....
To DAVID BROWN.....

for an expense is incurred which has not been met, and for which a corresponding liability should be shown.

If, later, David Brown is paid in cash the amount due him, the entry would be:

DAVID BROWN.....
To CASH.....

for the liability, as shown in the account payable, is extinguished by the turning over of an asset.

The final net result of the David Brown rent transaction is a charge to Rent and a credit to Cash, as in the first illustration.

Discount.

Discount is the abatement of a portion of a sum due or to become due.

Many classes of merchandise are sold on **credit,** that is, without cash payment, to persons with established financial standing, the time usually allowed being ten, thirty or sometimes sixty days. In such cases it is customary to allow a **discount,** or deduction, from the selling price in order to induce cash payments.

For example, if a bill of merchandise is bought for $1,000, terms net thirty days or one per cent. discount for cash, it can be settled by a cash payment of $990.

The term **discount** is also applied to the rate per cent. deducted from the face value of a negotiable instrument, and is in the nature of interest. It is a common practice for business concerns to issue their notes, generally for short periods of thirty, sixty or ninety days, without interest, and discount them at their banks, that is, sell them for what they will bring, the **proceeds** being the face of the note less the discount. Another method of securing cash is to endorse and discount bills or notes which have been received from customers, the discounting bank collecting the face value when due.

Discount deducted from such promissory notes, bills of exchange, etc., is computed by the method known as **Bank Discount,** that is, simple interest at the agreed rate of discount on the face of the bill for the time it has to run between the date of discount and maturity, counting the actual days.

Thus, the discount at 6 per cent. on a note for $1,000, maturing in

thirty days, would be $5, and the proceeds or net cash to the one who discounts the note would be $995. If the note bears interest, the discount is computed on the total of principal and interest due on the note at maturity.

Bank Discount is the method in common use, and the courts have held that the term **discount** in an ordinary commercial document means a rebate of interest and not **true** or **mathematical** discount.

True Discount is "that interest on a certain principal for the term and at the rate which, when added to its principal, gives the face of the note or bill discounted." Thus, in the example given, the **true discount** would have been $4.9751, and the **Present Worth** the difference between $1,000 and $4.9751, or $995.0249. That is, the sum of $995.0249 and interest thereon at 6 per cent. for one month will amount to $1,000.

True Discount is found by dividing the amount of the obligation by the amount of $1 for a given time and rate (in the above case $1.005); the result will be the Present Worth. The difference between the Present Worth and amount of the obligation is True Discount.

It will be seen that **Cash Discount** may be in favor of the business, as where a liability is settled before it is due, or it may be against the business, as where it is allowed to a customer for payment of an account before it is due; or it may be allowed to a bank for discounting a bill receivable or a bill payable.

Thus, discount may be an expense or a profit, and the Discount Account usually contains both elements, the balance of the account showing the net result of the total Discount transactions.

The same principles are involved in **Interest,** or the compensation for the use of money, when it is paid or received, and the items are frequently, although not necessarily, carried in one account under the caption **Interest & Discount Account.**

In determining the entry to be made for an item of Discount, the question is, Is it a profit or a loss? If it is a loss, it should be charged to Discount, because losses are charged and appear as debit balances of accounts; and the person in whose favor it is allowed should be credited. If it is a profit it should be credited to Discount, and the person from whom it is received should be charged. Items of interest received are similarly credited.

Trade Discount is a deduction from a **list price,** it being the custom in certain lines of business to keep a fixed list of prices, the fluctuations in the market prices being provided for by discounts from the list prices. Thus, if an article is listed at $8 a dozen, the price might be 10, 5 and 2 off, that is 10 per cent. off $8, leaving $7.20, 5 per cent. off $7.20, leaving $6.84, and 2 per cent. off $6.84, leaving $6.70, as the actual price.

Prices sometimes depend upon the amount of business transacted with the particular customer, such differences in price being provided for by the discounts allowed from list prices.

Trade Discount is ordinarily not taken into the accounts, as it forms no part of the real price.

Allowances may be for prompt payment, adjustment of prices or overcharges, etc., and are deductions usually made to secure cash settlements. They are ordinarily treated in the same manner as Discounts.

Bills Receivable and Bills Payable.

Promissory notes, bills of exchange and checks, are ordinarily termed **negotiable instruments.** Under the New York statute the essentials of a negotiable instrument are as follows:

1. It must be in writing, and signed by the maker or drawer;
2. Must contain an unconditional promise or order to pay a sum certain in money;
3. Must be payable on demand, or at a fixed or determinable future time;
4. Must be payable to order or to bearer; and
5. Where the instrument is addressed to a drawee, he must be named or otherwise indicated therein with reasonable certainty.

A **negotiable promissory note** is a written promise to pay to bearer or to order, for value received, a certain sum of money at a determinable future date. A **bill of exchange,** ordinarily called **bill,** is a written order of a person, called the **drawer,** upon a second person, called the **drawee,** to pay to bearer, or to the order of a third person called the **payee,** a certain sum of money at sight or at a determinable future date.

In Accounting, notes and bills, when they are due to the undertaking, are known as **bills receivable,** and when payable by the undertaking, are known as **bills payable.**

Checks, while they are negotiable instruments, are ordinarily treated as cash.

Settlement of liabilities is usually made by cash or by giving notes or bills. If settlement is made by cash, the creditor is debited and Cash credited. If settlement is made by bill, the creditor is debited and an account called Bills Payable is credited.

If the settlement is by cash, it is the extinction of a liability by turning over an asset of equal value, and hence, the liability is charged and the asset credited. If a bill is given for the liability, it is but a change of the form of the liability from an open account to a formal written obligation

to pay, and hence takes the form of extinguishing one liability by a charge and raising another liability account to take its place.

Bills Payable Account, being a liability, appears with a credit balance.

If a bill is issued with a view of obtaining cash, instead of the settlement of an open account, the ordinary method is to make a note for a certain amount, due at a future date, without interest. Such notes are usually discounted by a bank, the amount of cash received being debited, and the amount of discount, which is in the nature of interest paid in advance, is debited, and Bills Payable credited to balance, thus:

CASH.....
DISCOUNT.....
To BILLS PAYABLE.....

When the bill is paid, Bills Payable Account is debited, and Cash is credited, for it is the extinction of a liability by turning over an asset.

If the bill is not paid, but renewed by a new bill, Bills Payable is debited, and Bills Payable is credited, so that the settlement of the prior note and the issue of the new one will appear in the Bills Payable Account. Discount is charged and Cash credited for amount of discount on new note.

In the same manner, customers of the undertaking may make a settlement of their accounts in cash or by bill, and the procedure is to debit cash or Bills Receivable, as the case may be, and credit the account of the customer. Even when the sale to a customer, and the receipt of the bill receivable from him, are simultaneous, it is the best practice first to debit his account with the amount of sale, crediting Merchandise, and then pass another entry charging Bills Receivable and crediting the customer. In this way the ledger account with the customer discloses all of the transactions with him.

Bills Receivable Account, being an asset, appears in the accounts with a debit balance.

The bills are held in the Bills Receivable account until paid, when Cash is debited and Bills Receivable credited; or, until the bills are discounted, that is, the right to collect the face of the bill at maturity sold to the bank for whatever price in cash such right will bring. In case the note is discounted, Cash is charged with the proceeds, and the amount of discount is charged to Discount Account, crediting Bills Receivable Account.

If a bill receivable is discounted and afterwards is dishonored, that is, not paid by the maker when due, it will come back to the business for payment, inasmuch as it would under ordinary circumstances be endorsed. When such dishonored note is taken up Cash should be credited, if paid in cash, and the party from whom it was originally received is charged with the amount.

Dishonored bills should not be held in the Bills Receivable Account, but should be charged back to the party from whom they were received.

Distinctions Between Expenditures.

An expenditure for rent represents nothing but loss at the end of an accounting period, if no payments have been made in advance. An expenditure upon office furniture would represent, at the end of the accounting period, value nearly equal to the expenditure.

The rent, being a necessary expense incurred in obtaining the gross profit for the period, should, in determining the net profit for the period, be closed out against such gross profit.

If the office furniture is worth less to the business, by reason of use or otherwise, than its cost, such **depreciation,** being a loss incurred in making the gross profit, is chargeable against it the same as a direct expense.

It is necessary that these distinctions be kept in mind in distributing charges between Real and Nominal accounts, as the soundness of the accounting conclusions as to profit and loss are dependent upon distinguishing and charging against gross profit all the losses incurred in making such profit.

THEORY AND PRACTICE OF ACCOUNTS.

APPLIED ECONOMICS AND ORGANIZATION.

BY HOMER ST. CLAIR PACE, C. P. A.

LECTURE III.

CLOSING THE BOOKS.

Rests.

Among the fundamental requirements of an adequate accounting system as stated in Lecture I, there must be rests, or times at which the accounting record momentarily ceases. At such time of rest the financial position of the undertaking is ascertained and compared with former positions, and the intervening record is analyzed and studied with a view of increasing desirable, and decreasing or eliminating undesirable, results.

At the close of the accounting period, in order to attain the desired results, the process known as **closing the books** is carried out, although the expression, in its ordinary sense, does not mean a literal closing of all accounts in the books, but only a closing of the Nominal accounts that have been raised during the transactions of the period. It was formerly the practice actually to close out all accounts at the time of such rest, but this is no longer done, at least not by American and British accountants.

The process is a closing of the Nominal accounts into an account which is raised in the Ledger under the caption of **Profit & Loss,** and which is designed to show on the one hand, credit, the profits for the period, and on the other hand, debit, the expenses and losses for the period, the difference between the two, or balance, being the net profit or loss.

Trial Balance.

The initial step in closing the books is to test the accuracy of the postings and obtain a comprehensive view of the Ledger accounts. This is accomplished by the preparation of a **Trial Balance.**

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A **Trial Balance** is a schedule of the Ledger accounts, showing the debit or credit balance of each account, the balances being arranged in parallel debit and credit columns and effecting an equilibrium.

If the double entry principle is followed throughout in the entries and postings, and the balances of all the accounts are correctly abstracted and carried into the Trial Balance, the footings of the debit and credit columns will be the same, that is, they will balance.

Hence, the name, Trial Balance, meaning a trial of the accounts to ascertain if they are in balance.

A Ledger folio column is usually placed to the extreme left of the Trial Balance sheet to facilitate reference to the Ledger accounts.

The following is an illustrative Trial Balance of the accounts of a sole trader, taken at the close of an accounting period as a preliminary to closing the books:

JOHN SMITH

Trial Balance as at.....

L. F.		Dr.	Cr.
1	Real Estate	$10,000	
3	Furniture & Fixtures	1,100	
10	Cash	970	
12	Bond & Mortgage		$2,000
14	John Smith, Capital		14,590
100	John F. Jones	580	
105	Wm. Hall	2,410	
110	A. Brady	1,840	
200	A. Smith & Co		375
208	Ager Bros		900
212	W. A. Chandler		1,340
300	Merchandise		8,000
320	Rent	500	
321	Insurance	55	
324	Cartage	100	
326	Salaries	5,000	
330	Expense	4,900	
340	Interest		50
342	Discount		200
		$27,455	$27,455

Instead of the balances of the accounts, the totals of the debits and credits of each account are sometimes carried into the debit and credit columns respectively of the Trial Balance, and if the work is correct, the columns will balance as in the method of taking the differences, or balances. The first method is now the more usual, and has the advantage of showing, in each case, the net condition of the account, rather than the total of each side.

A Trial Balance is usually taken once a month in addition to the Trial Balance taken at the close of the period. By this means errors may be

discovered and corrected while fresh, and the corrective work distributed over the period instead of accumulating to be performed at the busy time of closing the books. In addition, the monthly Trial Balance affords a view of Ledger accounts which is useful in the management of the business.

The Trial Balance is valuable as a test of the accuracy of the work in posting Journal entries. If the balance cannot be effected, it is evidence of error, which must be corrected in order to bring the books to a balance.

Errors are, perhaps, most likely to occur in the preparation of the Trial Balance itself, through mistakes in addition and in abstracting the balances, or in omitting one or more Ledger accounts.

If there is no error in this work, the postings are open to suspicion as a likely place for errors to have occurred, and if it transpires that they are correct, it may be due to the Journal entries themselves not being in equilibrium.

While the attainment of a Trial Balance is not conclusive evidence that there are no errors, it is nevertheless strong evidence that the postings are correct, and that the balances have been properly abstracted.

One of the rare things that may occur is a compensating error, that is, an error on one side that exactly offsets an error on the other side. Such an error, as well as one by which an item is posted to the wrong account, without affecting the equilibrium of the books, will remain undetected so far as the balancing principle of the Trial Balance is concerned. However, the accuracy made possible by the Trial Balance check, characteristic as it is of Double Entry bookkeeping, quite compensates by its usefulness for the extra labor involved in making the entry with its twofold effect.

The other function of the Trial Balance is to afford a comprehensive view of the accounts as they exist in the Ledger, not only at the time of closing the books, but from time to time as the trial balances are taken during the business period.

At the time of closing the books, the Nominal accounts, brought to their proper amounts by adjustment entries after a careful survey of the business, are presented in the Trial Balance for scrutiny, and from it the information is obtained to formulate the Journal entries necessary to close the Nominal accounts into the Profit & Loss Account.

Trial Balance Book.

In order to preserve the Trial Balances a Trial Balance Book is ordinarily kept, ruled with numerous debit and credit columns so that the

balances may be inserted without rewriting the names of the accounts for each trial balance. The ruling is as follows:

L.F.	Names of Accounts.	Jan.		Feb.		Mar.		Apr.	
		Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.

The book is opened flat and the ruling extends over the two pages, affording columns for at least six months, and if an insert sheet is used between the pages, narrow enough not to obscure the names of accounts, columns for the entire year can be provided. The names of new accounts opened, ordinarily Personal accounts, can be added at the bottom of the list.

Closing the Nominal Accounts.

As a preliminary step, an **inventory** or schedule of the goods on hand is made. It is merely a detailed list of the merchandise on hand, with values carried out, ordinarily, at cost prices.

If a Merchandise Account has been maintained it will, presumably, stand charged with the amount of the purchases, and credited with the amount of the sales. If we deduct from the amount of purchases the cost of the goods on hand, the difference will be the cost of goods that have passed out of stock.

Stating the proposition arithmetically with illustrative figures from the accounts of John Smith, the purchases amount to, say.....	$60,000
The inventory of goods on hand, at cost, amounts to.....	6,000
Leaving cost of goods that have passed out of stock.....	$54,000
If the sales amount to, say.....	68,000
The excess of selling over cost price, or Gross Profit, is.....	$14,000

In Double Entry bookkeeping, the deduction of the amount of inventory from the cost of merchandise purchased is accomplished by crediting the Merchandise Account with the amount of Inventory. By the same entry a New Merchandise Account, or Inventory Account, is opened and charged with the amount of inventory, being at the moment a pure Real account, stating an asset value. The entry would be as follows:

INVENTORY AS AT——.....	$6,000	
To MERCHANDISE.....		$6,000

At this stage the Merchandise Account stands credited with the amount of sales..... $68,000
and with the amount of inventory..... 6,000

making the total credit..... $74,000
and it stands charged with the amount of purchases..... 60,000

the difference between the debit and credit sides of the Account being..... $14,000
which is a credit balance, and the amount of Gross Profit that was ascertained by the former solution.

The balance of the Merchandise Account at this time is purely Nominal, measuring the Gross Profit. It should be transferred to Profit & Loss Account, closing the Merchandise Account, by a Journal entry, as follows:

MERCHANDISE.....	$14,000	
To PROFIT & LOSS.....		$14,000

After the foregoing entries, the Merchandise Account, stating the purchases and sales in summary form, will appear as follows:

MERCHANDISE ACCOUNT.

To Purchases.....	$60,000	By Sales.....	$68,000
" *Profit & Loss* (Gross Profit)..	14,000	" Inventory.....	6,000
	$74,000		$74,000

The balance of the Inventory Account, or New Merchandise Account, representing cost of merchandise on hand at the beginning of the succeeding accounting period, should be charged against the Merchandise Account of such period.

The various expenses and losses standing to the debit of Nominal accounts will then be debited to Profit & Loss Account and the respective

accounts credited to balance, as has been explained in Lecture II. This can usually be done by one consolidated entry, thus:

PROFIT & LOSS To SUNDRIES..	$10,555	
RENT.....		$500
INSURANCE.....		55
CARTAGE.....		100
SALARIES.....		5,000
EXPENSE.....		4,900

The profits, other than the principal trading profit which has already been considered, are then credited to Profit & Loss Account and the respective Nominal accounts debited to balance, thus:

SUNDRIES To PROFIT & LOSS..		$250
INTEREST.....	$50	
DISCOUNT.....	200	

It is assumed in the illustrative figures that Interest and Discount accounts show a profit, but this, of course, is not always the case.

After the foregoing entries have been made and posted, the Ledger Profit & Loss Account will appear as follows:

PROFIT & LOSS ACCOUNT.

To Rent.....	$500	By Merchandise (Gross Profit) ..	$14,000
" Insurance.....	55	" Interest.....	50
" Cartage.....	100	" Discount.....	200
" Salaries.....	5,000		
" Expense.....	4,900		
" *Balance down* (Net Profit)...	3,695		
	$14,250		$14,250
		By Balance.....	$3,695

It is a desirable thing, in posting to the Ledger Profit & Loss Account, to show the items of profit and loss, instead of the **To Sundries** and **By Sundries,** which in themselves mean but little. Thus, instead of posting in a lump sum the total amount of expenses and losses, the amount transferred from each account, such as Rent, Insurance, Salaries, etc., is shown, and an inspection of the Ledger account will disclose the facts without recourse to the Journal.

The closing of the books is sometimes effected by direct transfers of the balances of Nominal accounts to the Profit & Loss Account, without the use of Journal entries. Thus, Rent Account would receive a direct

credit for the amount chargeable against the accounting period, and a debit for that amount would be made in the Profit & Loss Account. The use of the Journal entries is the better practice.

Withdrawals.

Drawings are ordinarily made by the proprietor from time to time, and should be charged to a **Drawing Account** or **Personal Account.** The drawings form no part of the profit and loss transactions, and therefore should not be taken into the Ledger Profit & Loss Account. The balance, net profit or loss, of the Profit & Loss Account, as was explained in Lecture II, should be carried to the Drawing Account. The balance of the Drawing Account will then represent the net increase or decrease of Capital for the period, taking into account all the profits or losses and drawings, and should be transferred to the Capital Account, increasing or decreasing that Account just as the net investment is increased or decreased.

In the illustrative case under consideration, there being no drawings by the proprietor, the Net Profit is carried directly to the Capital Account, by an entry as follows:

PROFIT & LOSS.....	$3,695	
To CAPITAL ACCOUNT.....		$3,695

The books will then disclose, as at the time of opening, assets to the debit of accounts and liabilities and Capital to the credit of accounts.

Asset and Liability Elements in Nominal Accounts.

Great care should be exercised in closing Nominal accounts, as it is evident that, in order to arrive at the true profit, only the expenses which belong to the accounting period should be charged and only the profits which belong to the accounting period should be credited.

The expense accounts appearing in the ante-closing Trial Balance may show more or less charged than rightfully belongs to the period, so that a careful scrutiny and adjustment are necessary.

If insurance, for instance, is paid during the period for a three-years' term, the entire amount will doubtless appear charged to the Insurance Account, although at the time of closing the books only that part which is paid for insurance for the current accounting period should be charged as an expense of that period. The balance, being insurance paid in advance, at this time should be treated as an asset of the business, and not as an expense.

The simplest way to treat such an account is to charge Profit & Loss Account with the amount chargeable for the period and credit the amount

to Insurance Account, bringing down the balance of the Insurance Account, as a debit which would remain in the accounts.

The opposite condition would exist in the case of rent which was accrued but not paid, and possibly not due. In such a case Profit & Loss Account should be charged with the full amount of rent chargeable against the profits of the period, and Rent Account credited. The latter would then show a credit balance, measuring the liability on account of rent. The account should then be ruled off and the balance brought down.

There are other methods of treating such accounts. One is to close the old account entirely and bring down the balance in a new account, as, for instance, Insurance, New Account, and allow it to remain as a balance. This is practically the same as the first method outlined.

Another plan is to open an account called **Suspense Account** and carry to it the debit and credit items, the balance being the net asset or liability. Upon entering the next accounting period the items are distributed to their proper accounts and the Suspense Account closed, by entries directly the inverse of those by which the account was created.

A **Suspense Account** is one raised to hold temporarily that which properly belongs to another account, so it will be seen that the use of a Suspense Account in this case conforms to the general use of such an account.

The method used is not so important, so long as the principle of charging to an accounting period all the expenses and crediting to it all the profits which properly belong to it, is rigidly followed.

It is not sufficient, in actual work, to rely upon the accounts that appear in the Ledger, but a critical survey of the business itself must be made to ascertain whether there are any outstanding assets, liabilities, expenses, losses or profits which should be brought into the accounts to arrive at the real results. In the illustrative accounts of John Smith, it is assumed that the accounts as presented in the Trial Balance stand at their proper amounts.

The Use of Nominal Accounts.

It should be recalled at this time that the same result, or effect upon Capital, would have been produced by charging every expense and drawing and crediting every profit, directly to Capital Account, and that the whole system of Nominal accounts is raised for the purpose of classifying expenses and profits so that the relation of each class to the ultimate result may be appreciated.

Post-Closing Trial Balance.

A new Trial Balance should be taken after the final result is carried to Capital Account, to test the accuracy of the closing entries and postings,

and to display Ledger facts in such a way that they will be available for the preparation of later statements.

It will appear from such post-closing Trial Balance that the Ledger accounts present practically the same elements as the original statement upon which the books were opened, viz., assets appearing as debits, liabilities appearing as credits, and Capital Account, with a credit balance, to balance.

Although the actual items of assets and liabilities may vary from the original figures and the Capital Account show a different balance, as will undoubtedly be the case, the elements will be the same.

In the accounts of John Smith, heretofore considered, the Post-Closing Trial Balance is as follows:

JOHN SMITH

Post-Closing Trial Balance as at.....

L. F.		Dr.	Cr.
1	Real Estate	$10,000	
3	Furniture & Fixtures	1,100	
10	Cash	970	
12	Bond & Mortgage		$2,000
14	John Smith, Capital		18,285
100	John F. Jones	580	
105	Wm. Hall	2,410	
110	A. Brady	1,840	
200	A. Smith & Co		375
208	Ager Bros		900
212	W. A. Chandler		1,340
290	Inventory	6,000	
		$22,900	$22,900

Upon the figures of the post-closing Trial Balance is based what is probably the most important statement in accounting—the **Balance Sheet.**

Balance Sheet.

The **Balance Sheet,** to define it in accordance with the generally accepted idea among accountants, is a statement of the assets, liabilities and capital of an undertaking as at a certain time, prepared from facts recorded in double entry books of account.

The Balance Sheet is the statement by which the financial condition of the business, that is, the amount and kind of its assets and liabilities, as recorded in the Ledger, is made comprehensible to the proprietor and others. It is, in short, the connecting link between the books, on the one hand, and the proprietor, and his bankers or others to whom he may desire to communicate the financial condition of his business, on the other hand.

The Balance Sheet, as the most important statement that can be prepared from double entry books of account, is worthy of the most careful

consideration, but in this elementary Lecture it is impracticable to do more than call attention to its most important characteristics.

The terms **Financial Statement, Business Statement, Statement of Resources and Liabilities, Statement of Assets and Liabilities,** etc., are sometimes used instead of the term Balance Sheet. None is so short as Balance Sheet, and as the term is in good standing among English-speaking accountants the world over, and is used by railroads, banks and large business institutions, no deviation from the accepted practice should be made by the Accountancy student.

The term **Statement of Assets and Liabilities** is generally reserved by accountants for the statement of assets and liabilities prepared from single entry books, or from sources other than double entry books.

A Balance Sheet should be headed with the name or style of the undertaking, and with the date at which it is made.

In the accepted American and Continental-European form, the assets appear on the left side of the Balance Sheet, under the caption **Assets,** and the liabilities, including Capital, on the right side, under the caption **Liabilities.**

The Balance Sheet being but a rearrangement of the post-closing Trial Balance, and not an account, the abbreviations **Dr.** and **Cr.,** and the introductory words **To** and **By** should not be used thereon.

In a single proprietorship or partnership it is customary to state the assets and liabilities in the order of their probable quickness in realization and liquidation respectively. In corporation Balance Sheets this order is ordinarily reversed, the quickest assets and liabilities appearing at the bottom.

The English practice is to reverse the sides of the Balance Sheet, placing the liabilities on the left side and the assets on the right side. This practice has doubtless grown out of the Companies Act of 1862, which provided for this illogical form.

The reason for the English form is not clear. The theory advanced in support of it is that, the statement being an account rendered to the proprietors, headed by the name of the undertaking, the undertaking should be credited with its assets and charged with its liabilities. As a matter of fact the Balance Sheet is not an account, but merely a rearrangement of the post-closing Trial Balance.

The Balance Sheet of John Smith, prepared upon the basis of the Post-Closing Trial Balance which has been given, is as follows:

JOHN SMITH

Balance Sheet as at.....

Assets		*Liabilities*	
Cash.....	$970	Bond & Mortgage.....	$2,000
Accounts Receivable, as per Schedule.....	4,830	Accounts Payable, as per Schedule.....	2,615
Inventory.....	6,000	John Smith, Capital.....	18,285
Furniture & Fixtures.....	1,100		
Real Estate.....	10,000		
	$22,900		$22,900

For the sake of simplicity, no provision has been made in the foregoing illustrations for losses that may be incurred in the realization of the accounts receivable, either through bad debts or discounts, nor for depreciation. Such provision could be made by charging Profit & Loss Account with the estimated amounts, and in each case setting up, with a credit balance, a reserve. Thus, a Reserve for Bad Debts could be created, to which uncollectable accounts could be charged. Instead of creating a reserve for depreciation it is sometimes written directly off the asset account by a credit entry, reducing by the amount of such entry the amount at which the asset is carried in the books.

In case reserves are created they should appear on the Balance Sheet as a deduction from the value of the particular asset for which they are created, and not as a balance on the liability side.

Trading Account.

Instead of using a Merchandise Account throughout the accounting period, the better and more modern method is to charge purchases to a Purchases Account, crediting returned purchases to the same account, the balance showing at all times the amount of net purchases; and to credit sales to a Sales Account, charging returned sales to the same account, the balance showing at all times the amount of net sales.

It is necessary when closing the books at the end of the period to bring together the elements of opening inventory, if any, purchases, sales and closing inventory, in order to determine the gross profit which has been made, and which, under the method of using a Merchandise Account, is shown by the credit balance of that account.

This is accomplished by raising on the books, at the time of closing, a **Trading Account,** to which the inventory at the commencement of the

accounting period, if any, is charged, and to which the subsequent purchases are charged, the opening inventory account and the Purchases Account being credited to balance, thus:

TRADING ACCOUNT.....
To INVENTORY AS AT.....
" PURCHASES.....

and by crediting the amount of Sales and closing inventory, closing the Sales Account by a charge to balance, and setting up the inventory at closing, thus:

SALES.....
INVENTORY AS AT.....
To TRADING ACCOUNT.....

At this stage the Trading Account will contain, in summarized form, all of the elements of a properly kept Merchandise Account, including a credit on account of closing inventory, and will show the Gross Profit which may have been made, by a credit balance.

The balance of the Trading Account, showing Gross Profit, is transferred to Profit & Loss Account, thus:

TRADING ACCOUNT.....
To PROFIT & LOSS.....

and the subsequent procedure of collecting in the Profit & Loss Aocount the items of profit and loss which are necessary to determine Net Profit, is the same as if the balance of Gross Profit had been transferred from a Merchandise Account.

If the business is large enough to justify it, a special account may be kept for returned purchases, instead of crediting them to the Purchases Account; and likewise a special account may be kept for returned sales instead of debiting them to the Sales Account. Where these divisions are made, the balance of the Returned Purchases Account is brought into the Trading Account, thus:

RETURNED PURCHASES ACCOUNT.....
To TRADING ACCOUNT.....

and the balance of the Returned Sales Account is brought into the Trading Account, thus:

TRADING ACCOUNT.....
To RETURNED SALES ACCOUNT....

thus bringing into the account the same elements as in the illustration where the division into special returns accounts was not made.

It is important to remember that the Trading Account is not maintained throughout the accounting period, but is raised only at the time of closing to collect the elements which are necessary to determine the Gross Profit, and to show by the balance of the account the amount of such Gross Profit, and that it is immediately closed by a transfer of its balance to the Profit & Loss Account.

Profit and Loss Account for Submission with Balance Sheet.

The two main purposes for which accounts are kept being the determination of assets and liabilities, and the determination of profits and losses, it is necessary that there should be statements prepared from the books of account which disclose these facts, for the information of the proprietors or others in interest.

The Balance Sheet, which has been described, displaying the assets, liabilities and capital as at a particular time, meets the first requirement.

The Profit & Loss Account, as transcribed from the Ledger Profit & Loss Account, including explanatory detail, showing the Gross Profit made for a certain period of time, with the expenses and losses chargeable against such Gross Profit, and the resultant Net Profit, meets the second requirement.

It is therefore apparent that a Profit & Loss Account may be either the Ledger Account raised under that caption, or the transcript of such account which is prepared for submission with the Balance Sheet, and which may vary somewhat in detail from the Ledger Account.

If a Merchandise Account is used in the accounts, the balance, showing Gross Profit, appears as a credit to the Profit & Loss Account.

If the division into Purchases and Sales Accounts is made in the accounts it is necessary to set up in the Ledger a Trading Account to determine Gross Profit.

In preparing a Profit & Loss Account for submission with the Balance Sheet, if the Merchandise Account is used, the Gross Profit appears as a credit balance. If a Trading Account is used, it is usual to submit it with the Profit & Loss Account proper, to show the items which go to make up the Gross Profit. In some cases it is included as a first division in a statement called **Profit & Loss Account,** or **Trading and Profit & Loss Account,** the balance, Gross Profit, being brought down to the second division of the Account.

The usual condition of a Gross Profit has been assumed throughout; although a loss upon trading is a possibility. It would not affect the handling of the Trading Account in any way.

In displaying such a Trading Account for submission with the Balance Sheet, it is the practice of American accountants to deduct the Inventory from the Purchases, by subtraction on the left side of the statement, instead of making the deduction by a credit entry as is done in the Ledger account. This is done in order to show, without a calculation on the part of the reader, the cost price, and to display such cost price in comparison with the selling price.

The Profit & Loss Account discloses the transactions that have led up to, and resulted in, the condition of assets and liabilities as shown in the Balance Sheet. In connection with drawings and contributions, if any, it connects the position as to capital disclosed in the Balance Sheet, with the position as to capital disclosed in the preceding Balance Sheet. It is this general idea of the purpose and use of the Profit & Loss Account which the student should acquire at this stage, leaving the details until later.

THEORY AND PRACTICE OF ACCOUNTS.

Applied Economics and Organization.

LECTURE III.

1. Describe the process of taking a trial balance. State the purposes of the trial balance and show its relation to the balance sheet.—Question from C. P. A. Examination.

2. What are the main features of difference between a trial balance taken at the end of a fiscal year before the books of a business are closed, and one taken immediately after the books are closed?—Question from C. P. A. Examination.

3. State explicitly and fully the function of the profit and loss account. Distinguish between the function of the profit and loss account and that of the balance sheet.—Question from C. P. A. Examination.

4–5. *Proposition.* The books of John Doe, a sole trader, at the close of his first year's business showed ledger account balances as follows: Capital $10,000, merchandise $1,800, rent $1,200, salaries $2,000, insurance $75, general expenses $1,800, drawings $900, cash $550, accounts receivable amounting in the aggregate to $4,275 and accounts payable amounting in the aggregate to $2,600. All of the assets, except inventory, and all the liabilities, are included in the foregoing balances. The balance of the insurance account, $75, represents a payment covering three years from the beginning of the business. The inventory of merchandise on hand is $8,100. Prepare journal entries necessary to close books, and prepare Profit & Loss account and Balance Sheet.

SUPPLEMENTAL QUESTIONS.

1. Show at least one way in which the method of double entry provides a check upon the work. Does the achievement of a trial balance prove the accuracy of the accounts?

2. Outline an entry recording interest due but not paid at time of making entry. What are the objects of such an entry?—Question from C. P. A. Examination.

3. What is the purpose of the trading account, and what general result should it show? In closing the ledger what disposition should be made of the balance of the trading account?—Question from C. P. A. Examination.

Bookkeeping Sets. The student who is not an experienced bookkeeper, should request memoranda for the bookkeeping sets at this point.

Elementary Theory of Accounts.

By HOMER ST. CLAIR PACE, C. P. A.

LECTURE IV.

THE CASH BOOK.

Scope of the Journal and the Ledger.

The student no doubt has observed that complete double entry books may be maintained by the use of the Journal and the Ledger; that accounts may be opened, maintained for a business period, and closed for the determination of profit and loss, with no other books than Journal and Ledger necessary to record every transaction.

The Journal and the Ledger are the essential books of double entry bookkeeping. It is true, however, that many other books are in common use. Such books, upon investigation, are found to be but forms of the two basic books, calculated to economize effort in the recording of transactions, while retaining the accuracy and other desirable features of double entry.

Direct Entry to Ledger Cash Account.

It will be recalled that, in Lecture I, it was stated that a complete record of business transactions could be maintained on the Double Entry basis in the Ledger alone, but, for reasons given, that such a method would be impracticable. Consider, for the moment, that such an abbreviated procedure is used for cash transactions, entries being made directly in the Cash Account in the Ledger, without the use of a Journal.

It is evident that the debits, on account of cash receipts, can be entered directly in the Cash Account, and the customary Ledger explanation, giving the name of the account receiving credit, can be utilized as a guide to the proper account to be credited.

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On the other hand, cash disbursements can be entered from the stub of the check book directly to the credit of the Cash Account, and the balancing charges made to the proper Ledger accounts from such credit Cash Account entries.

The procedure will be apparent from the illustration which follows:

LEDGER CASH ACCOUNT.

1902 Jan.	2	To John Smith, Capital Acct.....		$1,000	1902 Jan.	2	By Expense.....		$50
	3	" A. B. Childs & Co		200		2	" Purchases.....		300
						4	" Jones & Co....		100

It must be borne in mind that, in such an assumed case, entries would first be made in the Ledger Cash Account, balancing postings being made therefrom in accordance with the explanatory detail. Thus, to balance the initial debit entry of $1,000, that amount is credited to John Smith, Capital Account.

Such a procedure amounts to an elimination of the Journal so far as Cash transactions are concerned. The chronological order is preserved, however, so that the Cash transactions may be viewed in the order of their occurrence.

The foregoing method of direct entry in a Ledger Cash Account is rare in practice, and it is given in order to make clear the development and principles of the Cash Book.

The Cash Book.

The ordinary Ledger ruling does not afford space for sufficient explanatory detail, and for this reason, and others which will appear later, the Cash Account is taken bodily out of the Ledger, bound into a separate book, and instead of a single page containing debit and credit columns, a page is given to debits, and a page to credits, the pages being placed in opposition.

Such a Cash Account, bound in a separate book, in which cash transactions are recorded directly and postings made to Ledger accounts to balance, is known as a **Cash Book.**

Find the Cash Book where you may, in its simplest form, or with intricate columnar rulings, it amounts in principle to the same thing—a transposed Cash Account, given the dignity of a distinct binding, in which Cash transactions are entered in the first place, and from which balancing postings are made to maintain the double entry principle.

The following ruling illustrates the simplest form of Cash Book:

Dr. CASH. January, 1902.

Date.		Accounts to be Credited.	Explanatory Detail.	L. F.	Amounts.
1902 Jan.	2	To John Smith, Capital Account...	investment.....	.. 1	$1,000
	3	" A. B. Childs & Co.....	on acct.....	.. 75	200
					$1,200

CASH. January, 1902. *Cr.*

Date.		Accounts to be Debited.	Explanatory Detail.	L.F.	Amounts.
1902 Jan.	2	By Expense.....	printing.....	40	$50
	2	" Purchases.....	10 bbls. x @ $30.....	30	300
	4	" Jones & Co.....	on acct.....	90	100
	5	" *Balance forward*.....	.....	..	*750*
					$1,200

The pages would be opposite to each other, the Dr., or receipts, page disclosing the total cash receipts, and the Cr., or payments, page disclosing the total payments, the excess of receipts over payments being the balance of cash on hand.

The initial debit entry is posted to the credit of John Smith, Capital Account, the ledger page being inserted in the column provided for that purpose. The amount of the second entry is credited to the account of A. B. Childs & Co. On the credit page the inverse procedure is followed, the various accounts indicated being debited.

It will be seen from the foregoing that the procedure, in theory, is the same as in the case of direct entry in the Ledger Cash Account, and

that the Cash Book amounts merely to an amplified Ledger Cash Account, in which the original entries are made.

When either the Dr. or Cr. page is written full, the balance, usually a debit excess, is determined. In case of a debit excess, the amount is entered in red ink as **Balance Forward** on the credit page, thus bringing the pages to an exact balance, which permits ruling off. On the new Dr. page the balance is shown as **Balance Forward** in black ink

Another procedure is to carry forward total receipts and total payments, instead of the balance. This has the advantage of disclosing, by column totals, the total cash receipts, including opening cash balance, and the total cash payments, from the beginning of the month to any later date in the month. If balances were carried forward, to obtain this information it would be necessary to add the totals of the pages.

In the rare case of excess of payments over receipts, which may occur through an **overdraft** on a bank account, the balance will be a credit excess, and will constitute a liability instead of an asset.

Columnar Development.

The saving of effort accomplished by the use of the Cash Book as outlined, lies principally in the elimination of the Journal by making debits and credits directly in the Cash Book.

There is another avenue open for the economizing of effort, by the use of the principle which is expressed tersely in the axiom **the whole equals the sum of the parts.**

In the use of the Cash Book in practice it will be noticed that there are recurring items of disbursements, such as rent, salaries, postage, telegraph tolls, etc., which may all, or nearly all, be charged to an Expense Account.

To economize effort in posting, an inner column is provided on the credit side of the Cash Book, to which the Expense items are carried during the month, and at the end of the month the column is totaled and carried into the regular outside column, from which it is posted to the debit of Expense Account.

Thus, the labor involved in posting to an account that would ordinarily have more charges than any other account is reduced to the posting of one entry a month.

On the debit side of the Cash Book, the receipts on account of cash sales are apt to be numerous, and may be collected advantageously in a separate column of the Cash Book of the ordinary mercantile business. The cash purchases, which appear on the credit side of the Cash Book, ordinarily, on account of their rarity, do not call for a separate column.

A column, therefore, is provided for Cash Sales, on the inside of the regular debit column, and at the end of the month the total is carried to the regular debit column, and from it posted to the credit of Merchandise Account, or, if it is maintained, Sales Account.

It may be argued that an inspection of the Expense Account, or the Sales Account, at any time other than at the close of the month's business, would not disclose the true condition of the account.

This is true, but the condition of these accounts is rarely a matter of interest more frequently than once a month. If it is desirable to determine the exact condition of either, it can be done by adding to the balance at the beginning of the month the total of the unposted amount in the Cash Book.

The Cash Book is capable of indefinite expansion in this direction, it being practicable and desirable, in some cases, to divide the item of Expense into as many as ten subdivisions, with a column for each.

For the successful carrying out of this method, a Net Cash column should be provided on both debit and credit pages, in which the net receipts and the net payments respectively are entered, and from which, by ascertaining the excess of receipts over payments, the cash balance may be determined.

The use of the Expense and Cash Sales columns, as well as the Net Cash columns, will be illustrated after a consideration of the treatment of cash discounts.

Discount.

The question of discount frequently enters into the receipt and the payment of cash, not as a cash transaction, but as a concomitant, or coinciding, transaction. Thus, if a business receives $99 in settlement of a $100 account, payable under 1 per cent. discount, the discount, while no part of the cash transaction, is naturally associated with the cash receipt, and requires treatment at the same time.

If no Cash Book were maintained, the Journal entry would be to debit Cash $99, debit Discount $1, and credit Debtor's Account $100. If the Cash Book heretofore outlined were in use, the $99 would be carried into the debit side of the Cash Book and the $1 discount would be charged by a Journal entry, the Debtor's Account being credited with $99 from the Cash Book and $1 from the Journal entry. This would necessitate the use of two books of original entry to cover the transaction.

Items of discount flow from, and are associated with, cash transactions. For convenience of reference and economy of effort it is desirable to record such items in proximity to the cash transactions from which they flow and, therefore, columns are ordinarily provided in the Cash

Book for that purpose. Thus, in the illustration given, the receipt of the $99 is recorded in the Net Cash column on the debit side of the Cash Book, the $1 discount is recorded in the adjoining Discount column, and, preferably, the total, $100, is carried to a Total column.

The item of $100, being the amount which the cash payment of $99 liquidates, is posted to the credit of the one who makes the payment. Cash is charged with the $99 by the act of entering it in the debit side of the Cash Book, and it remains to charge the $1, representing the expense or loss in securing the cash settlement, to Discount.

It is a rule to carry postings from the debit side of the Cash Book to the credit of Ledger accounts, but it is evident that the effect of displaying the discount in proximity to the cash received, has been to introduce an element into the debit side of the Cash Book which must be placed to the debit of a Ledger account, for discount given, being an expense, or loss, cannot under any circumstances be credited to Discount.

This inconsistency is allowed to remain during the progress of the month's business, and the total is then carried to the credit side of the Cash Book in the Discount column. From there it is posted, as are all other items on the credit side (with the exception of discounts received), to the debit of the proper Ledger accounts.

The discounts received, which present a similar inconsistency, are allowed to remain in the Discount column on the credit side of the Cash Book during the progress of the month's business, and the total is then carried to the Discount column on the debit side of the Cash Book, and then posted, as are all other items on the debit side (with the exception of discounts given), to the credit of the proper Ledger accounts.

The carrying over is a simple matter, being an entry to Discount, stating, as an explanation, **Discounts given** (or received) *per contra*. After this, the postings are made as for any other Cash Book entry, as has been indicated.

This brings the postings from the Cash Book back within the rule that Cash Book debits must be posted to the credit of Ledger accounts, and Cash Book credits must be posted to the debit of Ledger accounts, and permits of a neat balancing of the Discount columns.

There are other methods of handling discount in the Cash Book, notably in the case of the use of Summary Entries in the Journal at month-ends. This will be considered fully in a later Lecture.

It is well to note that Discount forms the exception to the rule that nothing but actual cash transactions shall be recorded in the Cash Book.

Illustrative Cash Book.

The following illustration of an eight-column Cash Book makes clear the use of the columns which have been described:

Dr. CASH. January, 1902.

Date.		Accounts to be Credited.	Explanatory Detail.	L.F.	Net Cash.	Dis-count.	Cash Sales.	Total.
1902 Jan.	5	To Balance Forward	.....		$750			$750
	7	" J. Dunn.....	1%.....	78	99	$1		100
	7	" Cash Sale.....	10 C @ $50....	x	500		$500	
	8	" A. B. Childs & Co.	2%.....	75	490	10		500
	9	" C. S.....	5 A @ $60.....	x	300		300	
	9	" J. Dunn.....	1%.....	78	99	1		100
	12	" C. S.....	2 A @ $60.....	x	120		120	
	17	" J. Dunn.....	on acct.....	78	200			200
	21	" C. S.....	10 B @ $20....	x	200		200	
	29	" C. S.....	5 B @ $20.....	x	100		100	
	31	" Sales.....	total, for mo...	31				1,220
						12		
	31	" Discount.....	recd. per contra.	42		20		20
					$2,858	$32		$2,890

CASH. January, 1902. *Cr.*

Date.		Accounts to be Debited.	Explanatory Detail.	L.F.	Net Cash.	Dis-count.	Ex-pense.	Total.
1902 Jan.	5	By Expense.....	salaries.....	x	$35		$35	
	7	" Furniture.....	2 desks @ $45..	5	90			$90
	8	" Fixtures.....	shelving.....	6	110			110
	12	" Expense.....	salaries.....	x	35		35	
	14	" Jones & Co.....	2%.....	90	490	$10		500
	18	" Expense.....	postage.....	x	5		5	
	19	" Expense.....	salaries.....	x	35		35	
	25	" Berlin & Co.....	1%.....	91	990	10		1,000
	26	" Expense.....	salaries.....	x	35		35	
	31	" Expense.....	total for mo....	45				145
						20		
	31	" Discount.....	given per contra	42		12		12
					1,825			
	31	" *Balance Forward*	.....		*1,033*			*1,033*
					$2,858	$32		$2,890

It will be noted that in the case of items which are posted in a monthly total, such as Expense, the individual item is checked or ticked, and the Ledger page is inserted against the amount finally carried to the Ledger. *W. B. Thomson*

The ruling of a Cash Book should depend upon the needs of the particular business. The foregoing is given merely as a form correct in principle, which illustrates the theory covered.

Labor-Saving Principles.

The illustrations given make clear the two great labor-saving principles of the Cash Book, which are:

1. The elimination of Journal entries for cash transactions, the transactions being entered directly in the Cash Book.

2. The collection of similar items, in distinctive columns, to be posted by totals periodically.

Any further development of the Cash Book must be along the lines of the second principle, by the addition of columns.

The multiplicity of columns and volume of detail, which mark what are ordinarily considered complicated forms of the Cash Books, should not confuse when the two principles are clearly in mind.

Ledger Summary Cash Account.

If the Cash Book amounts to a transposed Ledger Account, it is evident that, in order to arrive at a Trial Balance, the balance of cash, as shown by the Cash Book, must be taken into account.

It is sometimes desirable, however, to have the Ledger complete, so that a Trial Balance may be taken from it without reference to any other book, while it is still expedient to use a Cash Book.

In such case, the cash transactions are carried into a Ledger Cash Account at the end of the month in summary form, making the Ledger Cash Account a summary, by months, of the Cash Book.

This is accomplished by posting, at the end of the month, the total receipts of cash, as shown by Cash Book, to the debit of the Ledger Cash Account, and posting the total disbursements to the credit of the Ledger Cash Account.

Or, more scientifically, Journal entries may be passed, debiting Ledger Cash Account and crediting Sundry Accounts for the cash receipts, posting the first part of the entry, and making a note that the Sundry Accounts have been credited directly from the Cash Book. The inverse procedure is carried out for cash disbursements.

There will, by either method, appear in the Ledger an account giving a summary of cash transactions, to be treated as any other account is treated in arriving at a Trial Balance.

Petty Cash.

All cash receipts should be deposited in bank, and all payments, as far as practicable, should be made by check.

It is usually found necessary to have available a small amount of actual cash to meet expenditures for telegrams, postage, car-fare, etc. Such a fund is known as **Petty Cash.**

A common, but unsatisfactory, method of handling Petty Cash, is to furnish the cashier, or other person handling the fund, with a small amount of cash, say $25, charging Expense and crediting Cash. When the money is expended, another amount is furnished, and so on.

If any expenditure is made from Petty Cash other than one chargeable to Expense, a corrective entry must be passed, debiting the proper account, which might, for example, be Furniture & Fixtures, and crediting Expense.

By this method corrective entries are necessary, and the Cash Book entry for the amount turned over to the cashier does not show the actual items of expenditure. If small cash receipts are not deposited, but taken into the Petty Cash fund, a Journal entry charging Expense and crediting sales or a personal account is necessary, and the situation is further complicated.

Imprest System.

A better method, known as the **Imprest** system, is to draw a check to the cashier for an amount estimated to be sufficient to cover the Petty Cash expenditures for a certain period, say a week, two weeks or a month, and to open a Ledger account in the name of the petty cashier, charging the amount so advanced, and crediting Cash.

At the end of the week, or other agreed period, the petty cashier presents an itemized statement of his Petty Cash disbursements, and a check is drawn for the exact amount and turned over to him in payment. An entry is made on the credit side of the Cash Book, the same as for any other disbursement, charging the proper account, usually Expense, with explanatory detail as to division between car-fare, postage, telegrams, etc.

This restores the Petty Cash fund in the hands of the cashier to its original amount, and the same procedure is followed for the next period.

The original amount stands charged to the cashier in the Ledger account, and no entry is made therein until the final settlement and relinquishment by the cashier of the fund. He then renders his final statement and turns over the balance of cash. Entries are made charging Cash

for the amount of cash turned over, charging the proper accounts for the disbursements, and crediting the Cashier's ledger account to balance.

A Petty Cash book may be used, showing upon the one hand the receipts, and upon the other hand disbursements, the latter in columns ruled to show division of expenditures for car-fare, postage, telegrams, etc., the total of these distribution columns being the total amount of expenditures for which check will be received. The totals of such columns furnish the items for the periodical statements.

Another method is to keep a running account of expenditures, classify the expenditures in the bill rendered, attach all vouchers which have been obtained, have the whole approved, and file.

No part of the cash receipts of a business should be placed, in the first instance, in Petty Cash. Cash receipts, no matter how small, should be deposited in the bank account.

Bank Accounts and Reconciliation of Cash.

The ordinary procedure of handling cash funds, viz., that of depositing cash in a bank or trust company account, and making payments by checks against such account, has been assumed throughout.

In this case, the net balance of cash as shown by the Cash Book, is the amount by which the total amount of deposits exceeds the total amount of checks drawn.

The bank furnishes what is known as a **Pass Book,** in which the total amount of each deposit is entered as made. The Pass Book should be left with the bank at the close of each month's business to be balanced. The bank adds the deposits, entering any that may have been omitted by failure to present Pass Book when making deposits, lists the paid checks chargeable to the account, and deducts their amount from the amount deposited, showing the resulting cash balance. The paid checks, with adding machine list thereof, are returned to the depositor with the balanced Pass Book.

Such Pass Book balance may not agree with the Cash Book balance, for the reason that there may be checks which have been issued but which have not been presented to the bank for payment.

Checks are usually numbered, and by arranging the paid checks in their numerical order, the outstanding ones are easily ascertained.

The amount of such outstanding checks deducted from the balance as shown by the Pass Book should give an amount which is exactly equal to the balance as shown by the Cash Book. If there are charges for collection of out-of-town items, or interest credits, they must be taken into account, and Cash Book entries passed to cover.

This procedure is called a **reconciliation of Cash.**

Instead of one bank account, two or more may be maintained. Usually no attempt is made to show the division of deposits and checks between different banks in the Cash Book, but the balances shown by the stubs in the check books, should equal, in the aggregate, the total cash balance shown in the Cash Book. The reconciliation with the banks is carried out in the manner before given.

Statement of Receipts and Payments.

A Statement of Receipts and Payments, or as it is sometimes known, Statement of Receipts and Disbursements, is one showing the cash receipts and cash payments of a concern for a certain period of time.

A Statement of Receipts and Payments is made in the form of a cash account, the receipts being placed on the debit side under the caption **Receipts,** and the payments on the credit side under the caption **Payments.**

The cash receipts and payments of a concern do not ordinarily disclose the profits for the period covered, for part of the profits may be represented by Accounts Receivable or other assets which are not converted into cash. In addition, there may be contributions of capital, or the purchase or disposition of assets, all of which, being cash transactions, will be embraced in a Statement of Receipts and Payments, but which do not necessarily affect the profit or earnings.

Statement of Income and Expenditure.

A Statement of Income and Expenditure, sometimes known as a Statement of Revenue and Expenditure, or merely Revenue Account, is a Statement of the income of an undertaking which properly belongs to a certain period of time, whether actually received in cash or not, and the charges which are properly an offset to such income, whether actually paid or not.

A Statement of Income and Expenditure is made in the form of a Profit and Loss Account, and will contain the same elements, Income appearing on the credit side under the caption **Income,** and expenditure on the debit side under the caption **Expenditure.**

To illustrate the difference between a Statement of Receipts and Payments, and a Statement of Income and Expenditure, the case of rent may be cited. An undertaking might pay its rent for the 10 months ending with October, and owe for the two months November and December. In preparing a Statement of Income and Expenditure (that is, a profit and loss account) for the year ending December 31st, it would be

necessary to charge against such statement rent for the entire 12 months, and set up in the accounts a liability for the two months' rent, inasmuch as the rent was a necessary expense incurred in making the profit.

If a Statement of Receipts and Payments were being made up for the same period, the actual cash paid out, which would cover only the 10 months' rent, would be carried in, the other two months, of course, not appearing in the Statement.

The foregoing statements are not Ledger accounts, but are statements prepared from the books for the proprietor or others who may require the information. They may cover several years in time, or only a part of a regular accounting period, as the case may require.

The distinction between these two statements must be thoroughly understood and kept in mind, for the principles involved are far-reaching in effect.

THEORY AND PRACTICE OF ACCOUNTS.

Applied Economics and Organization.

LECTURE IV.

1. State fully the theory of the cash book. Give rulings of a simple form of cash book and of a modern columnar cash-book, with illustrative entries to show operation of each.

2. Describe an improved system of recording petty cash transactions. Give illustrative entries covering final accounting of petty cashier in which he turns over vouchers for expense and property disbursements and a cash balance.

3. Distinguish between Revenue & Expenditure Account and Receipts & Disbursements Account. State fully the difference.—Question from C. P. A. Examination.

4–5. *Proposition.* John Doe expends $100,000 in the erection of a business block. At the end of the year he finds that the rents of the stores in the block have amounted to $7,500 and of the offices, $3,750. The expenses of the year have been: janitor and caretaker $750; repairs and alterations to suit tenants $500; water and gas $400; taxes .01975 on a valuation of $87,000; various incidentals $150. Make up a statement showing profit and the return on investment, after charging 5% interest on the capital invested and allowing $2,500 for depreciation.—Question from C. P. A. Examination.

SUPPLEMENTAL QUESTIONS.

1. Where and how would you record a customer's promissory note when (a) received, (b) discounted, (c) protested?—Question from C. P. A. Examination.

2. If your trial balance shows an account having a debit excess what does the circumstance signify? Does the debit balance shown upon the trial balance indicate the true status of the account? Explain.—Question from C. P. A. Examination.

3. Describe several methods of recording discounts on accounts as paid, (avoiding misstatement of receipts and disbursements). State the advantages or disadvantages of the methods proposed.—Question from C. P. A. Examination.

Elementary Theory of Accounts

By HOMER ST. CLAIR PACE, C. P. A.

LECTURE V.

SINGLE ENTRY BOOKKEEPING.

Bookkeeping.

Bookkeeping may be defined as the systematic and chronological recording of financial transactions, showing, in respect to the particular undertaking, ownership of values, liability for values, and the acquisition and transfer of values.

The bookkeeping record is maintained in order to be able to ascertain at any time the facts as to amount of assets and liabilities, and the facts as to the increase or decrease of net asset value due to trading or operation.

Upon analysis, it will be found that the minor purposes for which the bookkeeping record is made fall under one or the other of the two great objects—the determination of assets and liabilities, and the determination of profits and losses. Thus, it may be said that the bookkeeping record is useful as evidence in controversies, but it is apparent that this falls under the determination of assets and liabilities.

Single Entry Bookkeeping.

It has been pointed out that there are two methods of bookkeeping, viz.:

Double Entry, which is the method of expressing accounting results evolved from the doctrine of equilibrium; and

Single Entry, which, in the broadest sense, may be said to include all bookkeeping devices other than Double Entry. The use of Single

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Entry is now principally confined to small undertakings, especially those engaged in retail trading.

The consideration of Single Entry, now about to be undertaken, will be helpful in the specific matter of converting Single Entry books of account to the Double Entry basis, which is the connection in which Single Entry books most frequently come to the attention of the accountant. In addition, in its comparison with Double Entry, the advantages of the latter may be shown more clearly than in any other manner.

While, under the name of Single Entry, may be grouped all bookkeeping methods other than Double Entry, the term has a more restricted meaning, in that it is applied ordinarily to a method of bookkeeping in which accounts with **persons** only are kept. These include accounts with the proprietor, showing amount of investment, contributions of capital and withdrawals, and accounts with all individuals, firms and corporations with whom the undertaking has transactions that necessitate a record in books of account.

Real accounts, other than those that are personal, and Nominal accounts, which in Double Entry bookkeeping supply the elements necessary to effect the equilibrium, and which furnish analytical information useful in the conduct of the undertaking, are not maintained in Single Entry.

Books and Procedure in Single Entry.

In Single Entry, it is the custom to maintain a book of original entry, sometimes known as the **Day Book,** ruled in the usual Journal form, with two money columns to the right of the page. The column to the extreme right is reserved for amounts which are to be posted to ledger accounts. Both debit and credit entries, the former meaning an amount carried to the left of a Ledger account, and the latter an amount carried to the right of a Ledger account, are placed in this column, a notation being made against the entry, by a **Dr.** or **Cr.** abbreviation, indicating whether the amount is to be posted as a debit or a credit. The inside money column is reserved for details.

In opening Single Entry books, the amount of the investment is shown, with the details of the assets which constitute the investment. The investment, the amount of which is to be posted to the ledger account of the proprietor, is carried to the column to the extreme right, while the details of the assets are shown in the other money column.

Liabilities which are an offset against the assets, may be deducted from the assets in the opening entry, as will be illustrated later. Another procedure is to credit the investment account with the total amount of the assets, and by a separate entry charge the amount of the liabili-

ties to the investment account, the details of such liabilities being shown in the inside column.

It is thus apparent that the books will be opened with an account in the Ledger showing the net investment. If it is a partnership, an investment account is opened for the agreed net asset value contributed by each partner.

By the foregoing procedure it will be seen that the specific assets and liabilities are not recorded, but only an amount representing the net investment. But as accounts are to be maintained with all persons, if there are accounts receivable or accounts payable, it will be necessary to pass an entry or entries setting up such accounts.

Thus, for example, John Smith, a sole trader, starts in business, with the following assets and liabilities: Cash, $1000, Merchandise $4,000, due from John Doe, $1,000, and due to Richard Roe, $500. The opening entry would be made as follows:

NEW YORK, January, 1902.

Ledger Folio.		Column for Details.	Column for Posting.
	2		
	JOHN SMITH, Investment Account.....*Cr*...		$5,500.00
	For capital this day invested, details as under:		
	Cash, deposited in Traders' National Bank.....	$1,000.00	
	Merchandise, as per Inventory.....	4,000.00	
	John Doe, account receivable.....	1,000.00	
	Total assets.....	$6,000.00	
	Less Richard Roe, account payable.....	500.00	
	Leaving Net Investment, as above.....	$5,500.00	
	2		
	JOHN DOE.....*Dr.*		1,000.00
	For amount due me, as per opening entry.....	$1,000.00	
	2		
	RICHARD ROE.....*Cr.*		500.00
	For amount due him, as per opening entry.....	$500.00	

Two entries might have been made in the opening, crediting John Smith, Investment Account, with the amount of the assets, and charging him with the amount of the liabilities, achieving the same net result.

The entries are posted to a Ledger, which may be ruled in Journal form, with two money columns to right of page, or it may be ruled in the usual Ledger form, dividing it in the center, with debit money column to left of center ruling, and credit money column to extreme right of page.

It is apparent that, following the foregoing procedure, the books will be opened, showing all accounts with **persons,** including the **person** that is the proprietor, but that no accounts are opened for such assets as cash and merchandise.

In addition to the Day Book, it is customary to maintain a **Cash Book,** although in many cases the record which is kept in the check book suffices. When a Cash Book is kept, it has the ordinary Journal ruling, the inside money column being reserved for opening balance and subsequent receipts, and the column to the extreme right being reserved for payments, the difference between the two columns showing the cash balance.

Even when a Cash Book is maintained, it is the common practice to enter all cash receipts and payments which affect accounts with persons, in the Day Book, as well as in the Cash Book. All postings are made from the Day Book, the Cash Book merely showing the cash receipts and payments, including expense disbursements, which would not be posted or entered elsewhere.

The following is a usual form of Cash Book, with illustrative entries:

NEW YORK, January, 1902.

Column for Date.		Column for Receipts.	Column for Payments.
2	BALANCE.....as per Day Book.....	$1,000.00	
3	CASH SALES.....mdse.....	100.00	
"	JOHN DOE.....bal. due (entered in Day Book.	1,000.00	
4	RICHARD ROE...on acct. (entered in Day Book).		$250.00
"	RENT.....mo. Jan.....		100.00
"	EXPENSE.....stationery.....		18.00
"	*BALANCE*.....		*1,732.00*
		$2,100.00	$2,100.00
5	BALANCE.....	$1,732.00	

In the case of purchases on credit, no record is made of the merchandise received, but the concern from whom the purchase is made is credited by a Day Book entry. Later, when payment is made, the amount is entered in the Cash Book, the creditor is charged by a Day Book entry, and the account is closed.

Sales on credit are treated inversely. To illustrate a sales transaction, if goods amounting to $500, consisting of five items of $100 each, were sold to John Doe, John Doe's name would be written in, the abbreviation **Dr.** inserted against it, and the $500 carried to the column to the extreme right to be posted, while below would be given a list of the various items, with the amount of each carried to the inside column, which, totaled, would equal the $500.

Statement of Assets and Liabilities.

At the end of the accounting period, the financial position of the undertaking, when the books are kept upon the Single Entry basis, is displayed by what is known as a **Statement of Assets and Liabilities.**

The assets consisting of Accounts Receivable will be shown in the Single Entry ledger, and the balance of cash on hand can be ascertained from the check book or the Cash Book, and verified by counting the actual cash in hand and by having the bank pass book written up. An inventory is made of the other assets, care being taken that none are omitted, and that valuations are made on a conservative basis, eliminating bad debts. These assets are collected in schedule form, under the caption **Assets,** the amount of each asset being carried to an inside column, and the total of this column to an outside column on the extreme right of the sheet.

The various liabilities are then determined, the Accounts Payable, of course, appearing in the Single Entry ledger. They are then scheduled under the caption **Liabilities,** the respective amounts being carried to an inside column. The total of this column being carried out under the total amount of assets, and, being deducted therefrom, shows the net investment of the business.

The difference between the assets and liabilities, if the amount of assets be the greater, is the **investment.** If the liabilities exceed the assets, the amount of such excess is the **deficiency.**

The form of the Statement may vary in detail, but, as here given, it is usually a running schedule, stating assets first, then liabilities, which are deducted, the difference being the investment.

The term **Statement of Assets and Liabilities** is sometimes used to describe the statement, displaying somewhat similar facts, prepared from

Double Entry books of account, but the preferable term for the latter statement, and the one used throughout these lectures, is **Balance Sheet.**

It is not unusual to see Balance Sheet facts displayed in the running form, to economize in space, although the accepted form for the Balance Sheet is to display the facts in opposition.

Determination of Profit and Loss in Single Entry.

To determine the **Profit & Loss** (or **Loss & Gain** as it is sometimes called), for an accounting period, in an undertaking in which Single Entry books of account are used, it is necessary to have:

1. The amount of the net investment at the beginning of the accounting period, or a statement of all the assets and all the liabilities at the beginning, so that such net investment may be determined;

2. Similar facts at the close of the period;

3. The facts as to the withdrawal and contribution of capital during the period.

The difference between the investment at the beginning and at the closing of the period will be the net increase or the net decrease in the investment.

If withdrawals have been made by the proprietor, their amount must be added to the increase in investment, or deducted from the decrease in investment, to arrive at the net result as to profit or loss. This is necessary because assets, whether of cash or property, that are withdrawn by the proprietor for his own use, are not consumed to aid the business and, therefore, are not expenses of the business. It is frequently the case that the investment decreases, by reason of withdrawals, while there is, as a matter of fact, a profit for the accounting period

Contributions of capital present a condition the inverse of withdrawals, for such increase in capital has not been produced by the business. Therefore, from the increase of the investment must be deducted the contributions. If, despite the contributions, the investment has decreased, then to the decrease must be added the contributions, in order to determine the loss.

In addition to withdrawals, an amount is sometimes charged to the proprietor in a Salary Account. In determining the net profit, such an amount ordinarily should be treated the same as a withdrawal. The amount which the proprietor really earns through his effort is the amount of the net profit, less a reasonable interest upon the capital which he has invested. Therefore, an amount charged as his salary is fixed arbitrarily, and is in the nature of an advance against the profits which are being earned. However, if it were necessary to determine the probable net

profit of the business for the purposes of a corporation, organized to take it over, it would be necessary to charge as an expense the amount which the corporation would have to pay for services equivalent to those rendered by the proprietor.

If there have been neither withdrawals nor contributions between the opening and the closing of the accounting period, and the opening investment can be ascertained, and the closing investment can be determined by deducting from the amount of the assets, correctly valued, the amount of the liabilities, the difference between the opening investment and the closing investment will be the true profit, if there be an increase, and the true loss, if there be a decrease.

These facts are usually displayed in connection with the assets and liabilities, the investment at the opening and the closing being reconciled with the contributions, the withdrawals, and the profit or loss. This is known as the **Resource and Liability** method of determining profit or loss. As distinguished from the **Resource and Liability** method, the method of collecting nominal accounts in Double Entry is known as the **Profit & Loss** or **Loss & Gain** method.

In order to illustrate the construction of the statements which have been described, it will be assumed that John Smith, at the end of an accounting period, say December 31, 1902, has assets and liabilities, as per his Single Entry ledger, as follows: Investments at January 2, 1902, $5,500; withdrawals, $1,800; Accounts Receivable, $6,000; Accounts Payable, $3,000. From his Cash Book it appears that he has $1,250 in bank, and $50 in hand for petty cash disbursements, and his Merchandise inventories at cost $2,500. In addition to the liabilities in the Ledger, he has a note outstanding for $1,000.

It is required that a Statement of Assets and Liabilities be prepared, as at December 31, 1902, as well as a statement showing the results of trading for the year. It is desired that no allowance be made for possible losses in the collection of Accounts Receivable.

Following the procedure heretofore given, the following statement is prepared:

JOHN SMITH.

STATEMENT OF ASSETS AND LIABILITIES AS AT DECEMBER 31, 1902, DISCLOSING NET PROFIT FOR THE YEAR 1902.

Assets.			
Cash: In hand	$50.00		
In bank	1,250.00		
		$1,300.00	
Accounts Receivable		6,000.00	
Merchandise on hand		2,500.00	
Total Assets			$9,800.00
Liabilities.			
Accounts Payable		$3,000.00	
Bills Payable		1,000.00	4,000.00
Investment as at December 31, 1902.			$5,800.00
Investment as at January 2, 1902			5,500.00
Increase in Investment			$300.00
Add amount of withdrawals			1,800.00
Net profit for year			$2,100.00

Comparison of Single Entry with Double Entry.

In viewing the Single Entry bookkeeping procedure which has been outlined, and the statement which it is practicable to produce therefrom, it is evident that, in comparison with Double Entry, it labors under many disadvantages.

Considering the books of account proper, it is apparent that there is greater liability of error in Single Entry than in Double Entry. Thus, in the case of a sale of goods to a customer, if the amount, after being entered, were not posted to the debtor's account, there is no automatic check in the books which would act as a safeguard against a loss of the item. In Double Entry, on the contrary, a record of the amounts of sales being kept, it would be necessary to find and take into consideration the amount of every sale, in order to produce the equilibrium.

It is also apparent that in Single Entry no record is made of assets other than Cash and Accounts Receivable, and that reliance must be had upon schedules and other memoranda, providing no check against over-

sight. Thus, a security owned by a concern might easily be overlooked through the death or absence of the principal, or through his poor memory. If the ownership of such an asset were recorded in a Double Entry ledger, its existence must be noticed in every Trial Balance, and the record will show either its ownership, or its disposition, and the reasons therefor.

It is apparent that the complete record of all assets and liabilities maintained in Double Entry is a distinct advantage over the incomplete record maintained in Single Entry.

It is true that there is more labor involved in the first instance in Double Entry than in Single Entry. This has been largely overcome in the modern development of Double Entry by the use of additional columns in books of original entry, by which the balancing or nominal elements are carried to the ledger by monthly postings, instead of by daily postings. This principle has already been fully explained in Lecture IV in its application to the Double Entry cash book. By the use of this principle, the work involved in Double Entry is reduced to a point where it is little in excess of that required by Single Entry. It insures all of the accuracy and analytic benefits of Double Entry, with none of the disadvantages, but with the economy of effort, of Single Entry.

From a study of the illustrative statements which have been given, it will be apparent that the only information as to trading results is as to the net result for the accounting period. The reasons for the result, whether it be good or bad, are not apparent, and the total amount of business which has been transacted cannot be ascertained therefrom.

No record of expenses or losses, or of profits, being kept, or only a partial or inadequate one, the management cannot detect variations in particular expenses and profits, but is able to consider only the result as a whole after it has been accomplished.

In Double Entry, with expenses and profits recorded and divided into such items as Salaries, Rent, Insurance, Taxes, Discount, and Interest, and the trading accounts of Purchases, Sales, etc., set up, all of the elements being divided to as great an extent as the volume of business of the particular undertaking may justify, the status of any particular division may be compared with its condition at the same state of the preceding year's business. Therefore, the corrective work that is found to be necessary can be applied in time to avert possible losses or to increase profits.

Aside from the benefits to be derived throughout the accounting period, the analysis is particularly valuable at the close of the period in reviewing the entire work with a view to increasing the earning capacity of the undertaking during the succeeding period.

The advantages of Double Entry over Single Entry may, in view of the foregoing, be summarized as follows:

1. Less liability of error, through (a) automatic safeguards, and (b) fuller record.

2. Analysis of profit and loss elements, obtained from the accounts used to effect the equilibrium, securing (a) comparison of each element during the accounting period, and (b) comparison in periodical statements.

Underlying Principles of the Profit & Loss Account.

It is useful to understand fully why the Profit & Loss Account, as prepared from Double Entry books of account, discloses the facts as to profit or loss.

The nominal accounts, which are necessary to maintain the equilibrium, record the increase and decrease of assets and liabilities. Considering first a nominal account recording an expense element, it must be the result of a reduction of an asset or the creation of a liability. For example, rent may be set up as a debit entry, and if it is paid by cash, Cash Account is credited and thereby reduced. If it is not paid, a liability is created and recorded by a credit entry. Hence, a nominal account with a debit balance measures an unfavorable effect upon the net asset value in the business—the reduction of an asset or the creation of a liability.

Inversely, a nominal account with a credit balance measures a favorable result upon the net asset value in the business—the creation of an asset or the reduction of a liability. Thus, if merchandise that costs $15,000 is exchanged for $25,000, the account recording the merchandise may be credited with its cost, $15,000, to mark its elimination from the assets, and, to preserve the equilibrium, it will still be necessary to credit $10,000 to a nominal account, measuring the increase of asset value. The profit resulting from the extinction of a liability is rare, because liquidation is usually effected by turning over asset value equal to the liability. It might occur in the case of a donation, or the settlement of liabilities at less than their face, but such profit differs from the trading profit which is being considered.

The unfavorable, or debit, balances, are offset at the end of some convenient period, against the favorable, or credit, balances, in what is known as a Profit & Loss Account. For example, the net profit of $2,100 achieved by John Smith in the illustration which has been given, it may be assumed, resulted from the transactions displayed in the following Profit & Loss Account:

JOHN SMITH.

Profit and Loss Account for Year Ending December 31, 1902.

Dr.		*Cr.*	
To Salaries	$1,600	By Merchandise, Gross Profit	$10,000
" Wages	2,400		
" Rent	2,000		
" Cartage	600		
" Freight	525		
" Insurance	175		
" Discount	100		
" Expense	500		
	$7,900		
" *John Smith, Drawing Account, Net Profit*	*2,100*		
	$10,000		$10,000

The foregoing Profit & Loss Account means that the assets increased, in the gross, $10,000, against which it was necessary to offset the unfavorable balances, representing decreases of assets or increases of liabilities, leaving the increase of net asset value from trading as shown, $2,100.

In this case not all of the net profit was left in the business, $1,800 being withdrawn and charged to the proprietor's Drawing Account as and when drawn. To this account should be credited the net profit, disclosing the following condition:

JOHN SMITH.

Drawing Account for Year Ending December 31, 1902.

Dr.		*Cr.*	
To Withdrawals	$1,800	By Profit & Loss, Net Profit	$2,100
" *John Smith, Capital Account*	*300*		
	$2,100		$2,100

The amount of withdrawals was not consumed in making the turnover, and is therefore not taken into the Profit & Loss Account. But the amount measures a reduction of assets, and must be offset against the nominal account measuring the net profit, the excess of the latter being the actual increase of net asset value in the business.

The usefulness of the information derived from keeping a record of all assets and liabilities, and a classified record of their increases and decreases, as disclosed in the foregoing accounts, especially when used in comparison with preceding statements, is too obvious for further comment. Single Entry compares two financial positions. Double Entry does likewise, but submits in the Profit & Loss Account the reason for any changes which may have occurred.

THEORY AND PRACTICE OF ACCOUNTS.

Applied Economics and Organization.

LECTURE V.

1. State fully the benefits to be derived by the substitution of double entry for single entry books.

2. Describe the different methods of determining the loss or gain of a business.—Question from C. P. A. Examination.

3. Give all the steps to be taken in preparing a statement reconciling a bank account with the cash book.

4–5. *Proposition.* John Wild, a sole trader, whose books have been kept by single entry, desires to change them to the double entry method. The following is an abstract of his affairs at this date: Assets and liabilities per ledger: John Wild, investment $25,000, withdrawals $4,500. Sundry accounts receivable $8,500, sundry accounts payable $6,000. Other assets and liabilities not in ledger: Merchandise, per inventory $18,000, cash in bank $5,500, bills receivable $2,300, bills payable $2,000, bank stock $2,000, real estate $5,000. Determine the amount of gain or loss at this date and formulate a journal entry that will convert the single entry ledger to a double entry ledger.

SUPPLEMENTAL QUESTIONS.

1. What primary books of account are necessary for the proper and intelligent conduct of a small business? Describe the general form and uses of each book mentioned.—Question from C. P. A. Examination.

2. What is the proper course of procedure in taking charge of the bookkeeping of a firm that has either no books of account or very imperfect ones?—Question from C. P. A. Examination.

3. Rule and title five columns of a petty cash book in addition to the descriptive column, and make an illustrative entry for and in each distribution column.—Question from C. P. A. Examination.

Theory and Practice of Accounts.

APPLIED ECONOMICS AND ORGANIZATION.

By HOMER ST. CLAIR PACE, C. P. A.

LECTURE VI.

PARTNERSHIP ACCOUNTS.

Proprietorship.

It is necessary to leave, for the moment, the development of the theory of Double Entry proper, in order to consider the complications that arise through the form of proprietorship known as **partnership.** Heretofore, a single proprietorship, by which is meant an undertaking owned by one person, known as a sole trader, has been assumed.

Partnership.

Partnership is the relation created by the association of two or more legally competent persons, by express or implied agreement, for the purpose of contributing capital, skill or labor to a common undertaking, the profits and losses of which are to be shared.

The agreement forming the partnership may be in writing, or it may be oral, or the association of the persons as partners may be implied from their acts, without either an express written or oral contract.

It is usual, and the better plan, for partners to enter into a formal deed or contract of partnership, setting forth the amount of capital which each contributes to the undertaking, the proportion in which the profits and losses are to be shared, the allowance of interest, if any, upon the capital contributed by the partners, and the other matters affecting the partnership.

Division of Profits.

The partners may agree upon any division of profits and losses which to them may seem proper, but, in the absence of an agreement as to the division, they will be divided equally, irrespective of the capital contributed or the services rendered.

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While this is apparently inequitable, it may not be so in fact, for one partner without capital, through his ability to secure business, may contribute as much to the success of the business as a partner who contributes a large amount of capital. This principle arises frequently in practice in the settlement of partnership accounts.

Accounts.

The accounts of a partnership are substantially the same as those of a single proprietorship, except that provision must be made for recording the capital contributed in the proper proportion between, or among, the partners, and for recording their respective withdrawals.

A capital account is opened and maintained for each partner contributing capital, to which is credited the amount he contributes as capital. This is determined from the partnership agreement, or from such other sources as may be available. Subsequent contributions are likewise credited.

Withdrawals, in some cases, are charged directly to the capital accounts, but the preferable method is to open a withdrawal account for each partner, to which withdrawals are charged as made. To this withdrawal account the partner's proportion of the net profit is transferred when determined, and the balance of the account, the net increase or net decrease of capital, is taken to the partner's capital account.

Partnership Formed to Originate a Business.

In a partnership formed to originate a business, the books are opened by a Journal entry, setting up as asset accounts the items of cash or property contributed by the partners, and as liability accounts any offsetting liabilities, and crediting the net agreed value contributed by each partner to his Capital Account. This procedure establishes the equilibrium of the Journal entry.

The simplest case would be the contribution of the capital in cash by the partners. Thus, A and B might form a partnership and each contribute $5,000 in cash, in which case the books would be opened by a Journal entry as follows:

CASH.....	$10,000	
To A, Capital Account.....		$5,000
" B, Capital Account.....		5,000

This would be followed by a suitable explanation, setting forth the essentials of the partnership contract, or at least referring to it.

Although cash does not ordinarily pass through the Journal, opening entries, whether involving cash or not, should be recorded therein. From

the Journal the amount of cash may be carried to the Cash Book. If a Ledger Cash Account is maintained, the posting to it may be made from either the Journal or the Cash Book.

Considering a more complicated case, if X, Y and Z form a partnership, and X contributes $1,000 in cash, Y contributes $500 in cash and merchandise of the agreed value of $500, and Z contributes real estate, of the agreed value of $2,500, with bond and mortgage thereon of $500, the opening Journal entry would be as follows:

SUNDRIES To SUNDRIES		
For partnership of X, Y & Z formed to carry on the business of etc., etc., assets acquired and liabilities assumed, and the respective partners' interests therein, being as follows:		
CASH.....	$1,500	
MERCHANDISE.....	500	
REAL ESTATE.....	2,500	
BOND & MORTGAGE.....		$500
X, Capital Account.....		1,000
Y, Capital Account.....		1,000
Z, Capital Account.....		2,000
	$4,500	$4,500

A different procedure, and one equally correct in principle, would be to make three entries, each dealing with the contribution of a partner. This would show exactly what each contributes, but this can be accomplished, if it is considered desirable, in the explanatory part of the entry in the procedure given.

A Balance Sheet, setting forth the agreed values, should be prepared and signed by the partners, and preferably incorporated in, or appended to, the partnership agreement, in order to make the interests of the respective partners a matter of express written agreement.

Conversion of Single Proprietorship to Partnership.

The partnership may be created by the admission of another to a business which has theretofore been conducted as a single proprietorship.

Thus, if John Smith is a sole trader, and his capital as shown by his Balance Sheet is $10,000, and Charles Brown agrees to buy a one-

half interest on the basis of the figures shown in the Balance Sheet, the deal will be consummated by Brown paying to Smith, personally, the sum of $5,000. The cash passes directly to John Smith, and does not enter the accounts of the business.

If, as is most frequently the case, the same books of account are to be used for the partnership, John Smith, Capital Account, should be charged with $5,000, and an account under the caption of Charles Brown, Capital Account, should be opened and credited with a like amount. The entry carrying this into effect should be accompanied with an explanation of the admission of the new member. A Balance Sheet should then be made and agreed to, setting forth the capital of the partners, as a basis for future accounting.

The same result could be attained by payment of the cash into the business, charging Cash Account and crediting Charles Brown, Capital Account, and by a withdrawal of $5,000 in cash by John Smith, charging his Capital Account and crediting Cash Account. The former procedure is better, for it was not the intention that the capital should be, even momentarily, $15,000.

The procedure would be different if the agreement provided that Brown should bring into the business the $5,000 as additional capital. In that case, instead of its being merely a sale of a part interest, or the dividing of the capital already in the business between two people, it would be an increase of capital, and the $5,000 would be brought into the business and charged to the Cash Account, and Charles Brown, Capital Account, would be credited with the amount.

A Balance Sheet prepared under such a condition, as a basis for future accounting, would show, so far as capital is concerned, that Smith contributed two-thirds, $10,000, and Brown one-third, $5,000. Nevertheless, in pursuance of the rule given, the profits and losses would be divided equally unless there was an agreement to the contrary.

Good-will.

It quite frequently happens that the vendor, that is, the one who sells, has built up a valuable business and reputation, and believes that the business, as a going concern, is worth more than the book values.

This asset of well known name and reputation is known as **Good-will,** and from its frequent occurrence and importance in transfers and sales of this kind, merits special consideration.

Good-will is the benefit derived from the well known name and favorable reputation of a going concern. Lord Eldon's definition of Good-

will is perhaps the best known—"Good-will is nothing more than the probability that the old customers will resort to the old place."

An amount of actual capital, invested in the conduct of a business with a well known name and trade standing, will bring greater results than the same amount of capital invested in the same place, in a similar business, but without the helpful influence of such a name and reputation.

Hence, it is apparent that Good-will may have an actual value, and it is this actual value that entitles it to be treated as an asset in accounting. As a general principle, it may be raised legitimately on the books of a concern when its acquisition costs the reduction of an asset or the incurrence of an obligation.

Treatment of Good-will.

In the case of the establishment of a partnership by the association of an individual with a sole trader, the former proprietor may be compensated for his Good-will by an agreement, by which such an account is raised, the amount thereof being credited to the account of the former proprietor.

Thus, if the net investment were $10,000, and the agreed value of the Good-will $5,000, and the old books showed the Capital Account of John Doe, proprietor, to be credited with $10,000, the new man to contribute $10,000 in cash, the entry would be:

SUNDRIES To SUNDRIES		
For partnership this day formed by John Doe and Richard Roe, under the style of DOE & ROE to carry on business heretofore conducted by John Doe, value of Good-will and contribution of capital by Richard Roe, being, in accordance with partnership agreement of this date, as follows:		
GOOD-WILL.....	$5,000	
JOHN DOE, Capital Acct....		$5,000
For agreed value of Good-will		
CASH.....	10,000	
RICHARD ROE, Capital Acct.		10,000
For cash contributed as capital		

The Balance Sheet would then disclose that there is $25,000 of Capital in the business, of which $15,000 is credited to John Doe and $10,000 to Richard Roe.

Another method would be to pay to the former proprietor the agreed value of the Good-will in cash entirely apart from the books. This would insure to the former proprietor the full realization of the agreed value of the Good-will. If the amount were set up as an asset and credited to his Capital Account, as in the procedure first given, its eventual realization would, of necessity, be uncertain. If the cash were needed in the business, the former proprietor might contribute the cash so received' Cash being debited and his Capital Account credited.

In no event would the incoming man receive credit for any part of the agreed value of the Good-will, but would be credited in his Capital Account for his contribution of capital, which, in the example given, was $10,000. The Balance Sheet, in case of the payment of cash to the former proprietor, would disclose that each had a capital of $10,000. If the business were later sold and the Good-will realized $5,000, the amount would be divided the same as other profits.

Still another method, but one which apportions the benefit of the Good-will between the former proprietor and the incoming man, is for the latter to pay the agreed amount into the Cash Account of the new firm. A Good-will Account is credited with the amount, to be carried at a future time to the Profit & Loss Account and divided between the partners the same as any other profit. It is evident that this method divides the benefit in the proportion of the division of profits, instead of giving the whole benefit to the former proprietor, and achieves a different mathematical result from the procedures before given.

It is apparent that the intangible personal property known as Good-will may be acquired and sold under substantially the same limitations as exist in the case of other assets. Its treatment in accounts will depend upon the agreement in the particular case, and the illustrations given, covering the most common agreements, sufficiently indicate the procedure.

Purchase of Good-will by Firm.

In the case of the purchase of a business by a partnership, it is apparent that, if the net difference between the book value of assets and amount of liabilities exactly equals the purchase price, no Good-will Account need be raised on the books of the Vendee. But if the purchase price is greater than such net difference, the assets must be increased in value, or a Good-will account, or other account, raised, in order that the cost

may be shown and the Vendor may receive credit for the agreed purchase price.

Thus, in the case of a new firm taking over an undertaking upon the basis of a value greater than the net investment as shown by the books of the old firm, that is, when Good-will is bought in addition to the net asset value as shown by the books, it is often expedient, and entirely legitimate, to raise a Good-will account and charge it with such cost.

In such a case the assets to be taken over, including Good-will, are debited, and the Vendor credited, and the liabilities assumed are credited and the Vendor charged with their amount, leaving the net credit to the Vendor's Account the amount paid for his interest in the business.

The same result is accomplished, and, perhaps, preferably, by passing one entry, debiting the assets, crediting the liabilities, and crediting the Vendor to balance. In either case, the account with the Vendor is charged and closed as and when settlement is made with him.

To illustrate, William Walker, in business as a sole trader, prepares at a certain date a Balance Sheet of his business, as under:

WILLIAM WALKER.

Balance Sheet as at.....

Assets.		Liabilities.	
Cash.....	$1,450	Creditors.....	$1,475
Debtors.....	1,750	Wm. Walker, Capital Acct.	12,925
Merchandise.....	11,200		
	$14,400		$14,400

Messrs. Jones & Baker form a partnership for the purpose of taking over the business of William Walker, and each contributes as capital $7,500 in cash. They agree with Walker to take over the assets of his business, except the cash, and assume the liabilities, paying for his net interest the sum of $14,000. Jones & Baker acquire by this the net interest, which is the difference between the value of the assets taken over, $12,950, and the liabilities assumed, $1,475, being $11,475. The difference between this net interest, $11,475, and the agreed purchase price, $14,000, being $2,525, is evidently the amount which they are required to pay for Good-will.

Assuming that the book values are found to be correct and the Good-will, therefore, as stated, the Journal entries necessary to carry all of

the above transactions into the books of Jones & Baker, including the payment to the Vendor, are as follows:

CASH.....	$15,000	
To A. J. JONES, Capital Acct.....		$7,500
" ROBT. BAKER, Capital Acct.....		7,500
For partnership this day formed by A. J. Jones and Robt. Baker, under the style of JONES & BAKER to acquire and conduct the general merchandizing business heretofore conducted by William Walker, each contributing $7,500 in cash, profits and losses to be shared equally, in accordance with partnership agreement of this date, to which reference is hereby made.		

SUNDRIES To SUNDRIES		
For assets acquired, and liabilities assumed, as per agreement of this date with William Walker, viz.:		
MERCHANDISE.....	11,200	
DEBTORS (as per Schedule).....	1,750	
GOOD-WILL.....	2,525	
CREDITORS (as per Schedule)....		1,475
WILLIAM WALKER, Vendor....		14,000

WILLIAM WALKER, Vendor.....	14,000	
To CASH.....		14,000
For payment of balance due.		

A Balance Sheet of the books of the firm of Jones & Baker, prepared after the above entries had been carried into effect, would be as follows:

JONES & BAKER.

Balance Sheet as at.....

Assets.		Liabilities.	
Cash.....	$1,000	Creditors (as per Schedule)	$1,475
Debtors (as per Schedule).	1,750	A. J. Jones, Capital Acct..	7,500
Merchandise.....	11,200	Robt. Baker, Capital Acct.	7,500
Good-will.....	2,525		
	$16,475		$16,475

The agreed purchase price is sometimes less than the net investment as shown by the books. In this case the old book values of the assets should be scaled down, for there is no accounting justification for carrying in assets upon the opening of a business at figures greater than their cost to the undertaking.

This erroneous over-valuation is usually effected by setting up the assets at the former book values and crediting a Good-will or other account with the amount of such over-valuation, this credit later to be carried to Profit & Loss. It is not a profit, however, but simply measures an overstatement of the cost of assets.

We have now considered the acquirement of a business by a firm from three possible viewpoints:

1. Acquirement at a price that exactly equals the investment as shown by the books, which requires no Good-will Account;

2. Acquirement at a price greater than the investment as shown by the books, involving, if values are correctly stated, the setting up of a Good-will Account; and

3. Acquirement at a price less than the investment as shown by the books, which, in the books of the new firm, requires no treatment of Good-will.

Treatment in Books of Vendor.

The amount received for Good-will may, upon the books of the vendor, be credited to Good-will account. If this account is already charged with an amount greater than the amount received, the net result will be a debit to Good-will Account, representing a loss through its sale, to be treated as are the other losses in closing the books.

If there is no Good-will Account, or if the amount credited exceeds the amount already standing to the debit of Good-will, a net credit will

result, measuring the profit made, to be treated as are the other profits in closing the books.

In case the business is sold at a price less than the book values, Good-will does not enter into the matter. In such a case the amount received for each particular asset may be credited to the asset account, and if a debit balance remains, it should be treated as a loss. Profits and losses on the realization of assets are divisible the same as trading profits and losses.

Another method is to raise a **Realization & Liquidation Account,** charging it with the book values of the assets and crediting it with the liabilities, the asset and liability accounts being respectively credited and debited to close them out.

The Vendee is charged with the selling price and the Realization & Liquidation Account is credited, and the resulting balance, being profit or loss, is carried to capital the same as other nominal elements. This may include compensation for Good-will and thus obviate the necessity for raising a Good-will Account.

Upon payment by the vendee, the books may be finally closed and balanced by the withdrawal of the cash and an entry charging Capital and crediting Cash.

If this procedure were followed in the case of William Walker, Journal entries would be passed closing the assets, other than cash, and the liabilities, into a Realization & Liquidation Account, which would then be closed into Capital Account, as appears from the following:

REALIZATION & LIQUIDATION ACCOUNT.

Dr.		*Cr.*	
To Debtors	$1,750	By Creditors	$1,475
" Merchandise	11,200	" Jones & Baker, Vendee	14,000
" Wm. Walker, Capital Acct., profit on R. & L.	2,525		
	$15,475		$15,475

WM. WALKER, CAPITAL ACCOUNT.

Dr.		*Cr.*	
To Cash, withdrawal to close books	$15,450	By Investment	$12,925
		" R. & L. Acct	2,525
	$15,450		$15,450

The foregoing procedure may be used whether or not the question of Good-will enters into the matter. It is especially useful in case the realization and liquidation extends over a period of time and consists of many transactions.

Charges to Good-will.

Advertising and other expenses incurred in a business, even though they may help establish a well known name and reputation, should not be charged to Good-will, but should be charged off in the Profit & Loss Account the same as other expenses. Such expenditures may, or may not, result in the creation of Good-will. If the Good-will is sold, and a profit realized thereon, it will then be time enough to carry it into the accounts.

Extraordinary expenses, as for example, an initial advertising expense which is greatly in excess of the normal amount to be expended, may be distributed over a longer time than one accounting period, charging it against Profit & Loss over two or three years instead of one. Even in such cases, however, the quicker it is charged off the more conservative the practice.

Good-will, standing as an asset upon the books of a concern, is always a subject for close scrutiny and should represent only the actual cost of its acquisition. It should not be loaded with expenses incurred in building up the business, and should not be manipulated to produce a favorable result in the Profit & Loss Account.

Interest on Capital.

Interest is frequently allowed, under the partnership agreement, upon the capital contributed by the partners, and is a charge against the Profit & Loss Account before the net results are carried to the partners' accounts.

If the concern has sustained a net loss, instead of making a net profit, the interest charges are nevertheless made to the Profit & Loss Account, and the partners' accounts credited with the respective amounts of interest. This, of course, increases the amount to be carried to the partners' accounts as a charge, but the result will, perhaps, be divided equally, or at least upon a basis different from that of capital contributed, which necessitates carrying out the procedure indicated. It is really a matter of adjustment between the partners, usually to reduce to an equitable basis unequal contributions of capital.

No interest is allowable upon capital contributions unless an express agreement is made to that effect.

While the interest upon partners' accounts will appear in the Ledger Profit & Loss Account, in preparing a Profit & Loss Account to disclose the net profit of the business, care must be taken not to carry in such charges as an expense. The net profit is determined regardless of such adjustment between partners, and brought down as a balance in a subsequent division, and against it are charged the amounts to be credited to the respective partners as interest on capital. Such allowances are made to adjust unequal contributions and, in view of the fact that a concern is supposed to have capital with which to transact business, cannot be regarded as an expense.

Additional Contributions of Capital.

If partners bring in cash or property from time to time, the proper capital account will be credited with the agreed value.

If the item brought in is property, and its value is agreed upon, any loss upon its subsequent realization must be borne by the firm in the same proportions as any other loss.

If the value of property contributed has not been agreed upon by the partners, the Capital Account of the contributing partner will be credited with the amount of actual proceeds, not with the value he may have placed upon it, without the consent of his partner, at the time of bringing it into the business.

Only the contributions made **as capital** are considered as capital—other contributions would be in the nature of advances or loans to the firm.

THEORY AND PRACTICE OF ACCOUNTS.

Applied Economics and Organization.

LECTURE VI.

1. Explain fully wherein the accounts of a partnership differ from those of a sole trader. A, B and C, partners, agree that 5 per cent. interest shall be allowed on capital contributed. Draft illustrative entry covering such credits at close of accounting period. In case of a net loss for the period would your entry be different? Why?

2. What is meant by the Good-will of a business? Under what circumstances does it become important to determine the value of the Good-will of a business?—Question from C. P. A. Examination.

3. A and B, partners, each invest $5,000 without agreement as to sharing of profits and losses. B later contributes as capital real estate at the agreed value of $10,000, which is sold and realizes only $9,000. In settling the accounts at the end of the year A claims that the Capital Account of B should be credited with only $9,000 on account of the real estate, and that the profits be shared equally, while B claims that he should be credited with $10,000 on account of the real estate and that he should receive three-quarters of the profits. If you were called in as an accountant how would you treat the questions at issue in making up the accounts?

4–5. *Proposition.* Jones and Johnson are partners in business. Jones invests $27,000 and Johnson $18,000, and they agree to divide profits in proportion to their investments. At the end of the year their accounts show as follows: incidental expenses (including bad debts) $2,400; cash on hand $50; salesmen's salaries $12,000; cash in bank $1,200; accounts payable $7,416.92; bills receivable $2,650; taxes $950; Jones' drawing account $4,751.10; real estate $6,000; merchandise (inventory) $34,000; wages of office employees $3,275; Johnson's drawing account $3,631.11; bills payable $5,600; Commercial cable company's stock $5,000; balance in trading account (being gross profit) $38,743.21; accounts receivable (bad debts excluded) $20,975.82; freights $243; discounts on purchases $1,125.90; discounts allowed customers $760. Make out a profit and loss statement, and after dividing the profits according to the agreement, prepare a balance-sheet showing the capital of each partner at the close of the year.—Question from C. P. A. Examination.

SUPPLEMENTAL QUESTIONS.

1. State two methods of dealing with items accrued and due (such as rent, commission and salaries) on both the ledger and the balance sheet, when closing the accounts of the business at the end of the fiscal period.—Question from C. P. A. Examination.

2. What important features of a business are shown by double entry bookkeeping that single entry books cannot show? Explain fully.—Question from C. P. A. Examination.

3. Are partners' salaries and interest on partners' capital accounts chargeable against profits as expenses? Explain fully.

Theory and Practice of Accounts.

APPLIED ECONOMICS AND ORGANIZATION.

By HOMER ST. CLAIR PACE, C. P. A.

LECTURE VII.

THE RECORDING OF PURCHASES AND SALES.

The Journal.

The Journal, in Double Entry bookkeeping, is a book of original entry, designed, in the first place, to contain all of the original chronological record of financial transactions. The first step in dividing the Journal into different books, for greater economy of effort, consisted of the invention and use of the Cash Book, as has been set forth in a previous Lecture.

After the elimination from the Journal of the cash transactions by the use of the Cash Book, a scrutiny of the remaining entries will disclose the fact that they consist, largely, in the ordinary trading concern, of purchases and sales on credit.

It will be apparent that the credit purchases are principally of merchandise, although the various expenses may, to some extent, find their way into the accounts, through Journal entries, before liquidation. The credit sales, on the other hand, will be almost entirely on account of merchandise. Expenses which are not entered except in the Cash Book as paid, and purchases and sales of merchandise for cash, will be recorded in the Cash Book, and need not appear in the additional records which it is necessary to devise in order to relieve the Journal.

Invoices, Bills and Statements.

An **invoice,** as the term is ordinarily understood, is a detailed list of items of merchandise, with prices, supplied to a purchaser or consignee,

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for their use in checking the receipt of the goods. In addition, if the invoice covers a purchase, the items may be compared with the order, and other records, if necessary, in order to determine that the quantity and prices are correct. Upon the establishment of the regularity of the invoice, it should be approved by some one in authority, and then entered in the financial books. Under the definition, an invoice may apply to outgoing, as well as incoming, merchandise.

A **bill** may be defined as a statement of an account, or a claim for an amount due, whether for merchandise, services, or any other consideration.

In common practice, the term **bill** is used interchangeably with **invoice,** although the latter term is more often used in its application to incoming merchandise. It will be seen that an invoice, strictly, is but a list of items of merchandise, with prices, and is not necessarily a claim for an amount due. This is apparent in its use with consignments, where goods are not actually sold. The term **bill** is more comprehensive, and may include items other than merchandise. It is properly used when it covers a statement or claim for an amount due.

The term **Statement of Account** or **Statement** is most frequently applied to the monthly recapitulation of invoice or bill totals which is rendered by a vendor to a vendee. Thus, if during a month, ten different shipments of merchandise were made, a statement would be rendered at the end of the month, showing the amount of each invoice or bill.

Amplification of the Journal Proper.

In pursuance of the principle "the whole equals the sum of the parts," common to modern books of original entry, it will be necessary to collect items of a similar nature in columns, to be posted, as to the personal accounts affected, in detail, and as to the class of transactions, in periodical totals.

The original application of the principle to the purchases and sales transactions consisted of adding two money columns to the Journal, one to carry the merchandise purchases, and one to carry the merchandise sales, until the end of the month, the totals to be posted respectively to the debit and credit of the Merchandise Account.

The personal accounts affected are named in each entry, and, in case of a purchase, the creditor's account is credited from the entry; in case of a sale, the debtor's account is charged. The postings to the personal accounts, in conjunction with the total postings, effect the Ledger equilibrium.

The Journal may be ruled in various ways to accomplish this result. The ruling and entries which follow illustrate the procedure:

NEW YORK, JANUARY, 1902.

Dr.						*Cr.*
Purchases	General	L.F.	Names of Accounts and Detail	L.F.	General	Sales
			2			
$6,000		x	MERCHANDISE, 200 A @ $30, 1% 30			
			To J. F. JONES	155	$6,000	
			2			
	$5,000	200	BAGGOTT & CO., 100 A @ $50, 2% 10			
			To MERCHANDISE	x		$5,000
			3			
1,500		x	MERCHANDISE, 100 B @ $15, 1% 30			
			To DENNIS & CO.	160	1,500	
			3			
	75	10	FURNITURE & FIXTURES, 1 desk			
			To DIETZ CO.	173	75	
			5			
	1,250	208	THE BAYONNE CO., 50 B @ $25, 2% 10			
			To MERCHANDISE	x		1,250
			12			
	625	200	BAGGOTT & CO., 25 B @ $25, 1% 30			
			To MERCHANDISE	x		625
			16			
2,800		x	MERCHANDISE, 100 A @ $28, 1% 30			
			To J. F. JONES	155	2,800	
			31			
	4,700	205	BARMON & CO., 100 A @ $47, 1% 30			
			To MERCHANDISE	x		4,700
			31			
	200	110	RENT, Jan.			
			To SMITH REALTY CO.	174	200	
			31			
	25	120	CARTAGE, Jan.			
			To BAKER EXPRESS CO.	175	25	
			31			
$10,300		100	MERCHANDISE, total for month			
			To MERCHANDISE	100		$11,575

Under this method, the personal accounts are posted as the record is made from day to day, and their state may be determined at any time. The Merchandise Account is posted monthly.

Additional columns could be added to cover other classifications, to be posted monthly. For example, an Expense column could be added to

hold items of expense. The development of the Journal in this way, however, is limited by the fact that, in a large business, the transactions are so numerous that a division of the Journal into different books is necessary in order to enable more than one bookkeeper to work upon the records.

The study of the Journal method is useful, not so much on account of its practical utility, although it is still used in various forms, but rather as a means of leading logically to the consideration of the two important books in modern accounting, based upon the principle stated, that are the outgrowth of the method which has been briefly described.

Purchases Book.

If the column in the Journal in which purchases are recorded, and the details belonging thereto, are taken bodily out of the Journal and bound in a distinct volume, there will be produced a book known in accounting nomenclature as the **Purchases Book,** or the **Invoice Book.**

From its Journal origin it will have for each transaction, the date, the name of the concern from which the purchase is made and which is entitled to receive credit therefor, the details of the purchase, and the amount. These are the facts recorded in a simple form of Purchases Book.

The date column occupies the extreme left, and, progressing to the right, there may be provided a Ledger folio column, a column for creditor's name, column for details of purchase, column for invoice number, and column for amount of invoice.

Postings are made from day to day to the credit of the various creditors named, and the proper Ledger folio is placed against the name of each creditor in the column provided for that purpose.

At the end of the month, to complete the double entry, the total of the amount column is charged to Merchandise Account, or to Purchases Account, if purchases and sales are kept in distinct accounts, and against the amount thus carried from the Purchases Book is placed the Ledger folio.

Or, a summary entry may be passed in the Journal, debiting the Merchandise or the Purchases Account and crediting Sundry Creditors, noting that the latter have been posted in detail from the Purchase Book.

As in the method of adding columns to the Journal, the use of the Purchases Book enables one to ascertain the balance of the creditor's

account from the Ledger at any time, while the Merchandise or Purchases Account will show the proper balance only when the postings are completed at the end of the month.

By the use of the method outlined, the work is reduced nearly to the simplicity of Single Entry, but with the balancing and analytical benefits of Double Entry.

If Merchandise alone is passed through the Purchases Book, and there is only one class of Merchandise, or it is not advisable to separate the classes, a single column is sufficient for the amount of the invoices. It is sometimes desirable, however, where items other than merchandise, such as expense items, furniture or fixtures, etc., are purchased on credit, to provide additional columns in the Purchases Book therefor, and, in some cases, it is desirable to classify the merchandise purchased, providing a column for each class.

Thus, it might be desirable to provide a total column, supplemented by three distribution columns, one for Merchandise, one for Cartage and one for Sundries, the creditor receiving the posting from the total column. At the end of the month Merchandise or Purchases would be charged with the total of the Merchandise column, and Cartage with the total of the Cartage column.

The Sundries column, designed to take care of items not falling within the scope of the other two columns, will contain items chargeable to various accounts and, therefore, cannot be posted in total at the end of the month. On the contrary, space is provided next to this column in which to designate the account to be charged, and for Ledger folio, and the charge is made to the particular account.

Thus, by debiting Merchandise or Purchases for the amount of Merchandise, Cartage for the total as shown in its column, and debiting the particular accounts for amounts shown in Sundries column, debits will be made aggregating the total credited to the various accounts with the creditors.

In case the merchandise purchases were classified, and a column given to each class, the total of each column would be posted, ordinarily, to the debit of a Ledger account, opened under a suitable caption, to show the purchases of the particular class of merchandise.

The Purchases Book should be ruled to meet the needs of the business for which it is designed, and the following ruling, in which the transactions given in the Journal procedure are used, is given merely for illustration:

PURCHASES, JANUARY, 1902.

Date	L.F.	Account to be Credited	Details	Inv. No.	Total	Mdse.	Cartage	Sundries	L.F.	Amount
	Cr.									
2	155	J. F. Jones.....	200 A @ $30, 1% 30	210	$6,000	$6,000				
3	160	Dennis & Co.....	100 B @ $15, 1% 30	211	1,500	1,500				
3	173	Dietz Co.....	1 desk.....	212	75			Fur. & Fix.	10	$75
16	155	J. F. Jones.....	100 A @ $28, 1% 30	213	2,800	2,800				
31	174	Smith Realty Co...	Jan. rent.....	214	200			Rent.....	110	200
31	175	Baker Express Co.	Jan. cartage.....	215	25		25			
	Dr.									
x	x	Total Purchases.	.....		$10,600					
31	100	Merchandise....	.....			$10,300				
31	120	Cartage.....	.....				25			
31	x	Sundries.....	.....							$275

The use of a Total column provides a check upon the accuracy of the distribution of the items, and is especially useful where there are many columns.

In order to preserve the Double Entry principle, the total of the various columns charged at the end of the month must exactly equal the sum of the credits posted in detail from day to day. The principle is the same, whether one column or twenty be used in the Book, and once thoroughly grasped, mere multiplicity of columns should not confuse.

A great economy of effort is sometimes effected in a Purchase Book by the use of an inside, or indent, column. For example, city printers are apt to carry but little stock, ordering the stock for each job as it is required. This involves, in a business of any magnitude, a great number of credits, each ordinarily small in amount. The labor of entering such invoices in the Purchases Book from day to day, and making the postings, is heavy and out of proportion to the amounts involved.

To relieve this condition, it is frequently advisable to provide an inside, or indent, column, in the Purchases Book. The invoices are held until the end of the month, and are then sorted, so that the invoices from each creditor are arranged in order of dates. The name of each creditor is entered once, and against it, in the indent column, the amount of each invoice is entered. The total of such invoices, being the total amount of purchases from the particular creditor for the month, is then carried into the regular column, and one posting to the creditor's Ledger account is made to cover.

Inasmuch as discounts are figured, in that particular line of business, from the end of the month on the total purchases for the month,

the Ledger account, as posted in the foregoing method, supplies all the information that is ordinarily required. The disadvantage, if any, in the procedure, is that it collects the work to be performed at the end of the month, but this is more than offset by the great saving in entering and posting the items.

A method formerly in common use consisted of pasting into an **Invoice Book** the approved invoices. Either from the invoice itself, or a column provided on the extreme right of the sheet to which the invoices are pasted, the credit amount is posted to the creditor's account, or to a general Accounts Payable Account, Merchandise being charged with the total. This method is clumsy and generally unsatisfactory in use.

Returned Purchases.

Merchandise is frequently returned, for one reason or another, to the vendor, and if accepted, a credit memorandum is received covering the transaction. Such returns are known as **Returned Purchases,** and obviously require treatment in the accounts the inverse of that accorded when the purchase was made. Thus, if Merchandise were charged, and Belding & Co. credited, when the merchandise was bought, upon a return of all or a part thereof it would be necessary to charge Belding & Co. with the purchase price of the returned goods, and credit Merchandise.

The same ruling as that used in the Purchases Book may be used in recording Returned Purchases, so that, if the returns are not numerous, a page in the Purchases Book may be set aside for the returns of the month. The name of the creditor is inserted in the usual column and the amount is carried out and proper distribution made. The creditors are **charged,** and at the end of the month the Merchandise or other accounts are **credited,** being the inverse of the regular Purchases Book procedure.

If the returns are numerous enough, a separate **Returned Purchases Book** may be provided and ruled as indicated.

Creditors' Ledger.

It is usual, in the larger undertakings, to provide a separate Ledger for the accounts of creditors, known as a **Creditors' Ledger** or **Purchase Ledger.** It may consist of a single Ledger, or may be divided into several ledgers, to suit the needs of the particular business.

The approved method is to make the detailed postings from the Purchases Book and Cash Book to the accounts in the Creditors' Ledger, and, in the General Ledger, to operate a summary, or controlling, account

to show in summary form that which is posted in detail to the subsidiary Ledger. The subject of controlling accounts will be considered fully in a subsequent Lecture.

Sales Book.

In the amplified Journal procedure shown, a chronological record of sales was made, the items being posted from day to day to the debit of the customer, and a total posting made to Merchandise or Sales account at the end of the month to establish the equilibrium of the Ledger. No new principles are involved in passing from this procedure to a separate record, known as the **Sales Book,** in which the sales are recorded as made.

While the Purchases Book is liable to carry items other than Merchandise, the Sales Book, owing to the fact that little is sold but merchandise, ordinarily carries nothing else.

It is frequently desirable to divide, by the use of columns, the total sales between classes of goods, in order to show the sales of each class or of each department of the business. In such a case a total column would be used and the distribution made in columns under the desired captions, and at the end of the month the totals of the distribution columns would be credited to the various Ledger Sales accounts raised to conform.

Where it is desirable to keep a record of the sales made by salesmen, for the purpose of computing commissions, or other purpose, distribution columns may be provided in the Sales Book for that purpose. Thus, the total column would show the total sales for the month, and a column would be provided for each salesman and a general column for sales made by the office, the amount achieved by the summation of the distribution column totals exactly equalling the total sales column amount.

The following illustrates the form and use of a simple Sales Book:

SALES, JANUARY, 1902.

Date	L. F.	Accounts to be Debited	Details	Amount
	Dr.			
2	200	Baggott & Co.	100 A, 2% 10	$5,000
5	208	The Bayonne Co.	50 B, 2% 10	1,250
12	200	Baggott & Co.	25 B, 1% 30	625
31	205	Barmon & Co.	100 A, 1% 30	4,700
	Cr.			
	100	Merchandise	total sales for month	$11,575

In lieu of the use of the regular Sales Book, a common method is to bind in the form of a book, blank bills in duplicate, and by the use of a carbon sheet a duplicate is made of each bill. The original, which is perforated for the purpose, is taken out and rendered to the customer, and the duplicate, being a permanent sheet in the book, serves as the original entry from which the posting is made. It is customary to have three such books in operation, one for extra long bills, being one to a page, one for medium length bills, being two to a page, and the third for short bills, three to a page. The totals are carried forward from page to page, and at the end of the month the sales are totaled and posted to the credit of Sales Account.

The labor-saving effected comes from the fact that in making out the bill to be rendered, which would have to be prepared in any event, a duplicate is made which answers as the original entry. The disadvantages are that the books consume a large amount of space, and it is difficult to obtain an idea of how the sales are running from day to day from an inspection of the book, owing to the fact that at most but three sales appear on a page. And again, if it is desirable to divide sales between classes of goods the columnar arrangement cannot be worked out so well by the duplicate-bill method.

There are many forms of sales records in use, but from the procedures given a knowledge of principles and practice, sufficient for the purposes of this Lecture, may be obtained.

Returned Sales.

In the same manner as purchases may be returned to creditors, customers of the concern may return merchandise bought, and, under certain restrictions, receive a credit memorandum for the selling price thereof. Such **returned sales** constitute a condition the inverse of sales, and may be passed through the Sales Book on a page set apart for that purpose. Or, in case the business justifies it, a separate **Returned Sales Book** may be used.

In either case, the procedure is the inverse of Sales. The customers are **credited,** and Sales or Merchandise Account **charged.**

Customers' Ledger.

If the business justifies it, it is usual to provide a Ledger for customers' accounts, known as a **Customers' Ledger** or **Sales Ledger.** It may be a single book, or divided into several books, to meet the needs of the particular undertaking. The Customers' Ledger may be controlled by a summary account in the General Ledger, in the same manner as the Creditors' Ledger.

General Ledger.

The Ledger, in which the accounts other than those with creditors and customers are contained, is known as the General Ledger.

The Creditors' Ledger and Customers' Ledger which have been described are but sections of the Ledger classification. Therefore, in the absence of accounts in the General Ledger which control the subsidiary ledgers, it is necessary to include the accounts receivable, as disclosed by the Customers' Ledger, and the accounts payable, as disclosed by the Creditors' Ledger, with the accounts of the General Ledger, in order to achieve a Trial Balance.

Voucher Record.

In the Purchases-Book method of recording purchases, a Ledger account is opened with each creditor, to which the various debits and credits are posted. Ordinarily, the account with the creditor, disclosing balance due, the total purchases, and other information, serves a useful purpose with a minimum of labor.

In large corporations, particularly railroad corporations, purchases are made from so many concerns that the opening of Ledger accounts becomes burdensome. This is particularly true in view of the fact that, under the method of asking for bids and purchasing from the lowest bidder, the same article may be bought at different times from various traders. Under such conditions many accounts are opened and closed with but a single transaction.

The obvious way to overcome the necessity for individual accounts is to provide a summary account in the General Ledger, to which the total due creditors on account of purchases may be posted as a credit, and to which the total payments may be debited, the resulting net credit disclosing the amount due creditors. This will overcome the necessity for opening a Ledger account for each creditor, but provision must be made for determining the amount due the individual creditor at any time.

The attempt is often made to accomplish this result, in small concerns, by posting from invoices, usually pasted in an Invoice Book in order of dates, to an Accounts Payable Account. Payments made to creditors and discounts taken are charged thereto, and the credit balance should show the total due creditors. This method, correct in principle, is often unsatisfactory in operation because dependence is placed upon memoranda to determine the amount due the individual. The opening of individual Ledger accounts is, as a general rule, justified in a business small enough to render the use of this method successful.

In large undertakings the successful maintenance of a general, or summary, account with creditors, is insured by the use of the **Voucher Record,** or **Voucher Register,** as the book of original entry, and the auxiliary document known as the **Voucher.**

The term **voucher,** is used, broadly, to designate a document that establishes the accuracy of accounts or other facts. In a more restricted sense a voucher is a receipt, acknowledging the payment of money.

In its use with a Voucher Record, a voucher is a form of receipt, with provision for certain additional memoranda, not essential to the receipt proper, in accordance with the needs of the particular concern. A simple blank form of voucher is as follows:

(Distribution showing accounts to be charged.
This could be shown on back of Voucher.)

IOWA MILLING CO.
To (creditor).....Dr.
No..... (Address).....
Terms.....

(Details of items covered by voucher.)

Approved:
.....

Approved for Payment:
.....
General Manager.

Approved:
.....
Auditor.

....190..
RECEIVED of IOWA MILLING CO., the sum of
.....——Dollars
in full settlement of above account 100
.....

The voucher which is being described should not be confused with the **voucher check.** The latter is a form of check upon which appears, in more or less detail, a statement of the items payment of which is made by the check. The use of the check constitutes a receipt for the items specified. The statement of items appears on the end or back of the check, and is limited as to detail unless a check is used too large for convenient handling by the banks. While it often serves a useful purpose in general accounting, it is particularly useful in such cases as the payment of a dividend, the number and amount of the dividend being printed or stamped on the face of the check, and the endorsed and paid check furnishing a sufficient receipt. The form for use with the Voucher Record is not ordinarily combined with a check.

Upon receipt of an invoice the voucher is prepared and the necessary details filled in. The approval as to price and receipt of goods is indicated by the signature of the proper official. It is then approved by the auditor for entry in the accounts, and finally by the General Manager, or other official having the authority, for payment. A check is drawn for the proper amount and forwarded to the creditor with the voucher. The latter should be receipted and returned to the payer. It is then filed in the order of its number, together with the papers directly applicable thereto.

The voucher is entered in the **Voucher Record,** a book designed, in conjunction with the voucher, to take the place of the Purchase Book and the individual creditors' accounts. In a simple form, it will provide, on one page for the number of the voucher, date, name of creditor, terms and other details, amount, date and manner of settlement and Cash Book or Journal folio. On the opposite side, or page, provision is made for distribution columns, under the captions of the various accounts to which the purchases should be charged. Into these columns the amounts of the vouchers are distributed.

It is apparent that the rulings may vary to meet the needs of different concerns, but the most complicated examples will differ from the foregoing in little except columnar development, and will embrace no new principles.

The ruling and uses of the various columns will be more fully apparent from the following:

VOUCHER RECORD, JANUARY, 1902. (Right page.)

Date	Creditor	Voucher Number	Terms & Details	Amount	Payment	
					Date	Manner
2	Bement & Co.....	1001	net 30.....	$850	1-4-'02	C
3	Steele & Bro.....	1002	net 30.....	1,000	1-10-'02	C
4	Dick & Bye.....	1003	1% 10.....	125		
13	Bement & Co.....	1004	net 30.....	750		
31	Day & Co.....	1005	net.....	400	1-31-'02	C
31	A. J. Jones.....	1006	net.....	2,000	1-31-'02	BP
				$5,125		

VOUCHER RECORD, JANUARY, 1902. (Left, or distribution, page.)

Mchy.	Tools	Build-ings	Supplies	Repairs	Ex-penses	Miscellaneous Charges		
						Accounts	L. F.	Amount
$700	$150	$1,000						
				$75	$50			
550	200							
			$400					
						Real Estate.....	100	$2,000
$1,250	$350	$1,000	$400	$75	$50			$2,000

It should be understood that the foregoing rulings would be placed in opposition, and the distribution made, in accordance with the voucher details, as the voucher is entered. The distribution columns are often placed to the right, instead of to the left, as shown above. This is a matter that is governed entirely by convenience.

A Journal entry would be made at the end of the month, to bring the transactions into the Ledger, as follows:

SUNDRIES To UNPAID VOUCHERS.....	$5,125
For January purchases, viz.:	
MACHINERY.....	$1,250
TOOLS.....	350
BUILDINGS.....	1,000
SUPPLIES.....	400
REPAIRS.....	75
EXPENSES.....	50
REAL ESTATE (posted).....	2,000

The Real Estate, entered in the column for miscellaneous items, was posted from the Voucher Record, although it is a common custom to recapitulate such items at the month-end and enter in Journal, to be posted therefrom. Thus in the case of several entries affecting Real Estate, the amounts would be added and posted in one total amount.

In the Cash Book, payments to creditors on account of approved vouchers are collected in a column under a suitable caption, and at the end of the month a Journal entry is passed charging Unpaid Vouchers Account and crediting Cash Account. As each payment is made the voucher is checked in the Voucher Record, either by a check mark or by entering date of payment. If settlement is made other than by Cash, as by giving a bill payable, the entry is passed through the Journal, and the Unpaid Vouchers Account will receive the proper charge.

The unchecked vouchers in the Register should equal, in amount, the liability as shown in the Unpaid Vouchers Account. In the illustration given the Unpaid Voucher Account would be as follows:

Dr. UNPAID VOUCHERS. *Cr.*

1902				1902			
Jan. 31	To Cash.....	1	$2,250	Jan. 31	By Sundries....	26	$5,125
Jan. 31	" Bills Pay. (Journal).	26	2,000				
Jan. 31	" *Balance*.....		875				
			$5,125				$5,125
				Feb. 1	By Balance.....		$875

The balance due, $875, will be found to consist of the unchecked items on the Voucher Record, viz., No. 1003 for $125 and No. 1004 for $750. The approved and entered, but unpaid, vouchers, should be checked against the unchecked vouchers in the Voucher Record and the total liability as disclosed by Unpaid Vouchers Account.

The Voucher Record is capable of indefinite expansion in the matter of distribution columns. It has been deemed best to illustrate the method with simple rulings and few transactions, in order not to obscure the principles involved.

The advantage of the method lies in the elimination of ledger accounts with creditors and the heavy labor incident thereto. Its chief disadvantage lies in the lack of a record of all the transactions with a particular creditor in form convenient for reference. This, in many lines of business, is a serious defect. It may be overcome, to some extent, by means of an index operated in conjunction with the Voucher Register, showing the total transactions with each creditor.

Bills Receivable and Bills Payable Records.

The Journal having been stripped of cash transactions and purchases and sales on credit, may still have numerous transactions through the receipt or issue of negotiable instruments, usually promissory notes, in liquidation of accounts. These transactions, when numerous, may be recorded, at a saving of effort, in special books of original entry.

The **Bills Receivable Book** is a register of negotiable instruments received, showing date, from whom received, maker, endorser, due date, where payable, rate, amount, and such other information as may be of use. The name of the person from whom received, usually the maker, indicates the account to receive credit, and these personal accounts are posted from day to day. At the month-end the total of the amount column, being the total amount of bills received, is posted to the debit of the Bills Receivable Account, thus establishing the equilibrium of the Ledger. From a special column in the Cash Book, or otherwise, the total credit to the Bills Receivable Account is determined and posted, the balance of this account then representing the amount of unpaid bills on hand.

A special column for cash payments may be provided in the Bills Receivable Book, in which case as payments are made they are entered opposite the particular item.

A ruling illustrating the principle is as follows:

Date	L. F.	From Whom Received	No.	Endorser	Where Payable	Due Date												Rate	Amount	Remarks
						Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.			

The **Bills Payable Book** is a register of negotiable instruments, usually promissory notes, given, showing date, to whom given, due date, rate, amount, and such other information as may be of use. The individuals named are charged, or cash is charged, from day to day as the notes are given, and at the month-end the total of the amount column is credited to Bills Payable Account. Liquidations are charged to this account, so that the credit balance discloses the total notes outstanding. The ruling is substantially the same as the one shown for Bills Receivable, although it is subject to the needs of the particular business.

A renewal of a bill receivable should be passed through the records, the entry being to debit Bills Receivable and credit Bills Receivable. In the Bills Receivable Book the credit is secured by entering it the same as a new bill, indicating Bills Receivable instead of a customer's name, and the debit is included in the total posted at the end of the month. In the column for remarks the notation "Renewed" is entered against the renewed bill. The same principles apply in the case of the renewal of Bills Payable.

A Review of the Journal.

Instead of following the custom of stating, at the outset, that the Journal is a book through which opening and closing entries, summary entries, and extraordinary entries not coming within the scope of other books of entry, are made, and that it must be reserved for such entries, it has seemed preferable to reach this point gradually.

The Journal, in the evolution of Double Entry bookkeeping, has been relieved of the transactions resulting from the receipt and payment of cash, the purchase and sale of merchandise on credit, and the receipt and issue of negotiable instruments, by the use of certain special books of original entry. These books have been presented in the probable order of their invention, stripping the Journal step by step, until, at this stage, it will be apparent why the Journal, in which an entry covering any financial transaction may be made, as a matter of fact embraces but few.

THEORY AND PRACTICE OF ACCOUNTS.

Applied Economics and Organization.

LECTURE VII.

1. Show the advantages and disadvantages of the columnar development of books of original entry.—Question from C. P. A. Examination.

2. What is meant by the voucher system of bookkeeping? Describe the voucher record book.—Question from C. P. A. Examination.

3. Illustrate a columnar cash book, a columnar journal, and a columnar sales book. What general requirements should be observed in designing such books?—Question from C. P. A. Examination.

4–5. *Proposition.* The balance sheet of a manufacturer, January 1, 1897, shows the following state of affairs:

Bills payable	$30,000	Cash in Bank	$22,000
Creditors, Open Accts	16,000	Accounts Receivable	35,000
Capital	230,500	Inventory	49,000
		Patents and Good-will	20,500
		Horses and Wagons	15,000
		Plant and Machinery	85,000
		Real Estate	50,000
	$276,500		$276,500

A year later, January 1, 1898, after an audit of the books and accounts the balance sheet stands as follows:

Mortgage		$25,000	Cash in Bank		$21,150
Creditors, Open Accts		17,000	Agency Investments		15,000
Capital:			Accts. Receivable		33,000
Balance, Jan. 1, 1897	$230,500		Inventory		65,000
Profit this year	23,400		Patents & Good-will		20,500
		253,900	Horses & Wagons:		
			Bal. Jan. 1/97	$15,000	
			Less depreciation	2,250	
					12,750
			Plant & Machinery:		
			Bal. Jan. 1/97	$85,000	
			Less depreciation	8,500	
					76,500
			Real Estate		52,000
		$295,900			$295,900

From the foregoing it will be seen that for the year a net profit of $23,400 has been earned, while the accounts receivable are smaller, and the cash balance on hand is less than at the beginning of the year, though no withdrawals have, in the meantime, been made. Prepare account showing what has become of the profits earned.

SUPPLEMENTAL QUESTIONS.

1. What are the functions of a real estate account? What entries may it properly have on each side?—Question from C. P. A. Examination.

2. Describe fully a system by which occasional small sales made on credit to persons not regular customers may be recorded without opening a separate account with each purchaser.—Question from C. P. A. Examination.

3. Describe in detail the process of closing the accounts of a business contained in Ledger A and transferring them to Ledger B.—Question from C. P. A. Examination.

THEORY AND PRACTICE OF ACCOUNTS.

APPLIED ECONOMICS AND ORGANIZATION.

BY HOMER ST. CLAIR PACE, C. P. A.

LECTURE VIII.

CONSIGNMENTS AND SETTLEMENTS.

Definitions.

The word **consign** means to transmit something, by a person known as a **consignor,** to another, known as a **consignee,** to be held in trust for sale or other purpose. That which is consigned is known as the **consignment.** In commercial practice the terms are used in connection with sending merchandise to an agent or factor, to be sold usually on commission. The title of goods remains in the consignor, the factor being intrusted with them merely for the purpose of sale.

A common method of compensating the consignee for his services is a commission at an agreed percentage upon the gross selling price of the goods. There are other methods of compensation. For example, the consignee may receive for his services the amount secured in excess of a stated amount; thus, goods may by billed at a certain price, which is to be the basis of settlement in case the goods are sold, the consignee to receive for his services any amount that he may obtain in excess thereof.

The trader whose principal business is handling merchandise on consignment is known as a **commission merchant.** The trader whose principal business is purchases and sales on the ordinary basis may both receive and send merchandise on consignment, the receipt being called a **consignment inward** and the shipment a **consignment outward** or **shipment.** For the sake of brevity, it is satisfactory to designate goods received on consignment as **consignments,** and goods shipped on consignment as **shipments.**

A **joint adventure** is a form of special partnership for carrying on an undertaking, not permanent in its character, but involving a special enterprise such as the purchase and sale of a particular lot of merchandise, or a speculation in securities. It bears no relation to the subject of consignments, except that a very usual form of joint adventure is the asso-

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ciation of two or more persons to purchase and consign merchandise to an agent for the purpose of sale. Joint Adventure accounts will be fully treated elsewhere.

Principles.

During the Middle Ages, the hazards of commerce and transportation rendered uncertain the delivery of merchandise and the consummation of trades. Therefore, merchandise was sold to a great extent by sending it out first upon venture or consignment. The accounting took the form of recording the transactions in regard to the particular consignments or shipments of merchandise in such a way that their outcome as to profit and loss would be disclosed.

The conditions of trade have changed so that the usual method is to make direct sales of merchandise. This takes away the uncertainties of the disposal of the merchandise, and the necessity for a knowledge of the outcome of the particular shipments. From this change in trading practice grows one of the substantial differences between the early and the modern practice of accounting, as carried out by the Double Entry method. In modern accounting, except in the case of consignments, there is no necessity for the maintenance of accounts to show the outcome of specific shipments of merchandise.

Nevertheless, there is still a considerable volume of business transacted on the consignment basis, and it is interesting to note that in its nature it is more or less hazardous, and that, therefore, the old method of keeping a record of the outcome of each consignment is desirable. This is obvious in the produce business, which involves the handling of such perishable articles as fruits, vegetables, eggs and butter, and which is transacted almost altogether on the commission basis. The trader in such produce still declines to assume the risks that would accrue through an absolute purchase, and he merely acts as the factor of the producer. There are lines of business still conducted on the consignment basis in which the uncertainties have been largely removed, but in these cases a tendency may be noted to abandon the consignment method.

The uncertainties incident to the shipment of merchandise upon consignment render necessary the distinctive principle of consignment accounting, namely, that a record of the financial transactions of each consignment, whether sent or received, must be maintained in such a way as to disclose its individual status from time to time, and its final outcome. To carry this into effect, a number is given to each shipment or consignment for the purpose of identification, and the financial transactions in regard thereto are recorded in a distinct ledger account.

The principles underlying the treatment of consignments in accounts are the same, whether they constitute the entire business, as in the case of the commission merchant, or are merely incidental to the main business, as in the case of the trader in the ordinary way. It is intended to set forth these principles, and illustrate them with the procedures used.

Incidental Consignments Inward on Books of Trader.

Goods received on consignment are accompanied by an invoice stating the items, and often the values, which are nominal and do not constitute a charge. Upon receipt of the consignment, a memorandum entry should be made in the Journal, or in a special Consignment Journal, ruled to meet the needs of the business, if the consignments are sufficiently numerous to justify such a book, giving a number to the consignment for identification purposes, and stating the name of the consignor, items received, rate of commission, and such other detail as may be necessary to a complete record. This is a memorandum entry only, no posting being made.

The objection may be raised that this does not bring the transaction into the Ledger, and that it may, therefore, be overlooked. In properly kept memorandum records, this does not follow, and in any event the receipt of the merchandise will usually necessitate the payment of such expenses as freight and cartage, and this provides an opportunity to bring the transaction into the Ledger, and to raise the distinctive account.

A Ledger account, under the consignment number, as, for example Consignment No. 31, is raised, and the expenses incurred through the receipt of the goods are charged to it. Upon the sale of the goods, Cash, if it is a cash sale, or the Debtor, if it is a sale on credit, is charged with the selling price, and the Consignment Account is credited. Any further expenses, as well as the amount of commission due the consignee for his services, are charged to the Consignment Account, and the net credit balance of the account is the amount due the consignor. When payment is made of the balance due the consignor, as disclosed by the Consignment Account, the latter is charged to balance it and Cash is credited.

In the case of several consignments, or of continuing transactions upon the consignment basis, the balances due upon the particular consignments are transferred, when the goods are sold and the balances determined, to a general account payable, opened in the name of the consignor, and the payments to him are then charged to this account. From this ledger account an **account current** disclosing the debits and credits pertaining to the account for a certain period, and the resulting balance, to be described more fully later, may be prepared.

Thus, B received on December 29, 1901, 500 barrels of Merchandise X, shipped by A on December 26, 1901, with an invoice value placed at $7 per barrel, $3,500, to be sold on a commission of 5 per cent. On the date of receipt, December 29, 1901, freight amounting to $465 was paid, and on December 30, 1901, cartage amounting to $35 was paid. On January 9, 300 barrels were sold to Jones & Co. on credit at $10 a barrel, and on January 10, 200 barrels were sold for cash at $11 a barrel, and an Account Sales, to be described later, was rendered.

The transactions will be journalized to illustrate the accounting principles, and, for the sake of simplicity, the cash entries will be included, although in practice they would doubtless be passed through the Cash Book. The Consignment Account, as set up in the Ledger, will be given, in order to show the result of the consignment. The entries and account follow:

Journal or Consignment Journal:

DECEMBER, 1901.

29

Memo. Entry.

For this day received from A, 500 barrels of Merchandise X, commission 5 per cent., being Consignment No. 31.

Journal (Cash entries included):

DECEMBER, 1901.

29

CONSIGNMENT No. 31	$ 465	
To CASH		$ 465
For freight, 500 bbls. X.		

30

CONSIGNMENT No. 31	35	
To CASH		35
For cartage, 500 bbls. X		

JANUARY, 1902.

9		
JONES & CO	$3,000	
To CONSIGNMENT No. 31		$3,000
For 300 bbls. X @ $10		
10		
CASH	2,200	
To CONSIGNMENT No. 31		2,200
For 200 bbls. X @ $11		
10		
CONSIGNMENT No. 31	260	
To COMMISSION		260
For 5% commission on sales of $5,200		

Ledger:

CONSIGNMENT No. 31.

1901				1901			
Dec.	29	To Cash, freight	$ 465	Dec.	31	*By Balance*	$ 500
	30	" Cash, cartage	35				
			$ 500				$ 500
1902				1902			
Jan.	2	To Balance	$ 500	Jan.	9	By Jones & Co., 300 bbls. X @ $10	$3,000
	10	" Commission, 5%	260		10	By Cash, 200 bbls. X @ $11	2,200
	10	" *Balance*	4,440				
			$5,200				$5,200
				1902			
				Jan.	10	By Balance	$4,440

The foregoing Ledger account discloses the balance due A, and would be closed by a debit of $4,440 upon settlement or transfer to the personal account of A.

Assuming that the books of B were closed at December 31, 1901, the debit balance to Consignment No. 31 would be treated as an asset, as it is an advance secured by the consignment of merchandise. The balance of the account would be brought down as indicated, and, on the

Balance Sheet, grouped with similar items. The value of the consigned merchandise on hand does not appear in the books and would not appear in the Balance Sheet.

If advances of cash were made by B to A before actual sales had been made, they would be a charge to the Consignment Account, and the account, to the extent of such advances, would be an account receivable. The factor may pledge the goods on account of advances to his principal, or to reimburse himself for balances due on account. The factor has a general lien on goods in his possession for any balances that may be due him, that is, he may hold the goods for any balance due on the particular consignment, or for balances due on other accounts.

A running, or open, consignment account is often maintained, on which sales are reported monthly and which become an immediate charge against the consignee. In such a case, when the report is not accompanied by a check, interest may be allowed by the consignee on the balance of the account.

Alternative Method.

An alternative method that is not regarded with favor by many accountants on account of the extra labor involved, is carried out by opening two accounts. By this method, when goods are received upon consignment, an entry is made charging a distinctive account, as, for instance, Consignment Account No. 31, and crediting A, Consignment Account, for the invoice value of the goods, with explanation giving a description of the goods, stating the commission to be allowed, and other necessary detail. The price received for the goods is credited to Consignment Account No. 31 as and when sales are made. The balance of the account, when the goods are entirely sold, is the excess of selling price over inventory value of the goods, and is transferred to A, Consignment Account, by a charge to Consignment Account No. 31, and a credit to the former. This amounts merely to a trading account covering the goods consigned.

A, Consignment Account, which, in the meantime, has been charged with freight and other expenses chargeable to the consignment, is charged with the agreed commission, and the balance to the credit of the account is the amount due A. When the indebtedness of A is liquidated, the account is charged to balance.

The argument advanced against this method, aside from the extra labor involved, is that, inasmuch as there was never any real liability to the consignor, such liability should not be shown in the accounts. The liability, however, is nothing more than a consignment, or goods, liability, and is so shown in the caption of the account, and is offset by the asset

set up contra. The first method is accepted as the better practice, and the second method is explained mereiy for the purpose of informing the student as to the alternative procedure.

Account Sales.

An **Account Sales** is a statement disclosing transactions incident to a consignment, and is rendered by the consignee to the consignor. The items of merchandise sold, and the prices received therefor, are stated, the total receipts constituting the gross charge to the consignee. The amount of the freight and other expenses incurred, as well as the agreed commission, are deducted, the remainder being the net amount for which the consignee accounts. Unsold merchandise is shown on the Account Sales as a memorandum, usually at the foot of the statement. An Account Sales, prepared in the usual form, to cover the transactions before given, would be as follows:

B, COMMISSION MERCHANT.

No .....

ACCOUNT SALES of 500 bbls. X, received December 29, 1901, from, and sold by order of, and for account of, A:

1902			
Jan. 9	300 bbls. X @ $10.....	$3,000	
10	200 bbls. X @ $11.....	2,200	
			$5,200
	Less Charges:		
	Freight.....	$ 465	
	Cartage.....	35	
	Commission, 5%.....	260	
			760
	Net Proceeds Due.....		$4,440

The form of the Account Sales may differ from the above. For example, the word **By** may precede the sales, and the word **To** the charges, and in the case of the Account Sales covering different classes of merchandise, with numerous sales, a column may be provided for each class, and the total carried out to obtain the total proceeds of sales. It may also be set up in account form, as a transcript of the Ledger account.

Consignments Inward on Books of Commission Merchants.

The accounts necessary to record consignments when handled by a commission merchant do not differ essentially from those used when the handling of consignments is incidental. The approved procedure is to treat the merchandise received in memorandum records until actual financial transactions take place. To illustrate the application of the principles, the methods of a concern selling cloth upon commission will be considered.

The consignments received are entered, upon notice from the receiving department, in what is known as an Invoice Book, providing columns for date, case number, style number, yards, and the name of the mill from which the consignment is received, a page or number of pages being given to each consignor. This is in the nature of a memorandum book and forms no part of the double entry system.

A Sales Book is maintained with columns for date, name of customer, ledger folio, and total amount sold. In addition, distribution columns are provided, one for each consignor or mill whose product is handled.

Upon receipt of notice from the shipping department that a certain lot has been sold and shipped, a note to that effect is made in the Invoice Book against the original entry. An entry is made in the Sales Book charging the customer and crediting the consignor or mill for whose account the sale is made in the column provided for that purpose. At the end of the month, the total sold for each consignor, as disclosed by his column in the Sales Book, is credited to his account.

It is customary to render an Account Sales to each mill weekly from the facts recorded in the columns of the Sales Book. At the end of the month, a statement, recapitulating the Account Sales, is rendered, deducting returns, thus showing the net sales. The charges incurred, which have been charged to the consignor's account as paid, are deducted, as well as the commissions earned, the balance showing the net amount due the consignor, as disclosed by his account.

It will be understood that the consignor's account is credited from the Sales Book, and is charged with expenses, and when the commissions are charged at the end of the month, the balance discloses the amount due. The unchecked items in the Invoice Book will constitute the consignments on hand.

Shipments.

The shipment of goods by the consignor, that results in the consignment inwards with the consignee, requires treatment on the books of the consignor. The desirability of keeping the record so that the outcome

of each shipment may be known, leads, in the usual practice, to an immediate transfer of the cost value of the goods shipped to a distinctive shipment account in the Ledger, numbered for the purpose of identification. This is in contradistinction to the memorandum treatment used in consignments inward until financial transactions take place, although in some cases, as will be explained later, the memorandum method is desirable in the case of shipments.

The most usual procedure in recording shipments is to raise a Shipment Account, with a distinctive number, at the time the goods are shipped, in the General Ledger, or in a special Consignment Ledger, to hold all such accounts, if the shipments are numerous enough to warrant such a book, to which the cost value of the merchandise consigned is charged. Theoretically, the raising of the Shipment Account is the transfer to it of the cost value of the merchandise from the account to which it was charged in the first place. In case a Merchandise Account is maintained, the credit would naturally have to be made to that account, although confusing the cost value of the goods consigned with the credits to the account by reason of sales is an undesirable procedure, as, in fact, is the entire method of using a Merchandise Account.

In case the more modern method of keeping the purchases and sales in distinct accounts is used, the credit can be immediately made to the Purchases Account, although this would impair the statistical value of that account, for the reason that its balance would not disclose either the gross or the net purchases.

Another method, that obviates some of the undesirable features of the others, is to raise a Consignments Account to which the cost value of all merchandise placed upon consignment during the accounting period is credited, the balance of which during the accounting period will, therefore, disclose the cost value of goods shipped on consignment.

If the latter method is used, the entry upon placing the goods upon consignment would be a charge to, say, Shipment Account No. 10, and a credit to Consignments Account, at the cost value of the goods shipped. Any charges, such as freight and cartage incurred in placing the goods upon consignment, are chargeable to the Shipment Account, and in accounting practice are entitled to rank as an addition to the asset value of the goods on consignment. The credits for such charges would be made to Cash or to the proper creditor, and would, of course, not affect, in any way, the Consignments Account.

Upon receipt of an account sales from the consignee, an entry is made charging the consignee, if the account is not settled, or charging Cash or Bills Receivable, if it is settled by cash or bill, with the net proceeds,

and crediting the Shipment Account. As an explanation to the entry, it is well to state the details of charges, and commission of the consignee, as disclosed by the account sales. If the entire amount of goods on the particular shipment is sold, and the procedure outlined carried out, the Shipment Account will disclose the net profit or loss on the shipment, to be carried to the Trading Account or Profit & Loss Account at the time of closing the books.

The procedure will be illustrated by using the transactions given in the Consignment of A to B. The transactions will be journalized, including cash entries, and the Shipment Account, Consignments Account, and Personal Account of B, set up.

Journal:

DECEMBER, 1901.

26

SHIPMENT No. 10.....	$3,500	
To CONSIGNMENTS.....		$3,500
For consigned B, 500 bbls. X, to be sold upon 5% commission.		

JANUARY, 1902.

13

B.....			4,440	
To SHIPMENT No. 10.....				4,440
For sold: 300 bbls. X @ $10.....		$3,000		
200 bbls. X @ $11.....		2,200		
		$5,200		
Less Charges:				
Freight.....	$465			
Cartage.....	35			
Commission 5%....	260			
		760		
		$4,440		

Ledger:

SHIPMENT No. 10.

1901 Dec.	26	To Consignments.....	$3,500	1901 Dec.	31	*By Balance*.....	$3,500
1902 Jan.	2	To Balance.....	$3,500	1902 Jan,	13	By B.....	$4,440
	13	" *Balance*.....	940				$4,440
			$4,440	1902 Jan.	13	By Balance (profit)...	$940

CONSIGNMENTS.

				1901 Dec.	26	By Shipment No. 10..	$3,500

B.

1902 Jan.	13	To Shipment No. 10..	$4,440				

Assuming that the books were closed at December 31, 1901, the debit balance to Shipment No. 10, $3,500, being the cost value of goods shipped upon consignment, would be treated as an asset. On the Balance Sheet, it would be stated as inventory upon consignment. Had expenditures such as freight and cartage been incurred in placing the goods upon consignment, it would be allowable to charge them to the Shipment Account and treat the combined amount of inventory value and such expenditures as asset value.

The balance to the Consignments Account, being an amount withheld from the credit side of the Merchandise Account, or the Purchase Account, for the reasons stated, may be credited to either, or to a trading account. That this is correct in principle may be seen from the fact that in the case given, it is merely inventory, and that this is, in effect, the same as is done with the inventory of merchandise not placed on consignment.

That it would be correct, in case the goods have been sold, to credit it likewise, may be seen from the fact that it represents cost of goods sold, withheld for the time being from the Merchandise Account or Sales Account. In connection with profit or loss, to be transferred from the shipment account, it would give the element of sales.

Thus, the entire amount standing to the credit of Consignments Account at the end of the accounting period, representing cost of goods sold on consignment and cost of inventory on consignment, may be credited to Merchandise Account or Trading Account, whichever is used. An analysis between the two elements may be made if desirable, and the cost of goods sold may be combined with the results transferred from the shipment accounts to determine the net selling price of goods sold on consignment, if such course is desirable.

In any event, merchandise consigned must not be treated as sales at least until actual sales are made and it passes from the consignment status.

Alternative Method.

An alternative method is based upon the theory that a shipment of merchandise upon consignment amounts merely to a transfer of stock from warehouse to the possession of the consignee, and requires no entry other than a memorandum record of such transfer until financial transactions actually take place. For the purpose of making the memorandum record, a Shipments Book is maintained, in which a record is made of the lots of merchandise sent out upon shipment, giving a distinctive number to each shipment and details of goods shipped. In case many shipments are made to one consignee, it is sometimes desirable to allot a special page in the Shipments Book to such consignee. As the shipments are sold and account sales received, they are checked from the Shipments Book, so that an inspection of this book, if properly kept, will disclose the stock out on shipment. Especial care is necessary in keeping such a book, for in the absence of the necessity of making it prove with other records, the entries may be carelessly made. It answers its purpose well enough if properly kept. In the case that shipments are so rare that a special Shipments Book is not justified, a memorandum Journal entry may be made in the same manner as was suggested to record the receipt of consignments inward.

Upon receipt of an account sales covering a shipment, entries are passed, charging the consignee with the net proceeds, and crediting the amount to a Sales Account, or to Merchandise Account if the latter is kept. It would be practicable to credit such amounts to a Shipment Sales Account, to be transferred to the Trading Account at the end of

the period, if it were desirable to make the segregation between sales on shipments and sales on the ordinary basis.

If charges were prepaid on shipments, they could be charged to a general account called Freight and Shipments. At the end of the accounting period, this account would be analyzed, and the charges on outstanding shipments would be retained as a deferred charge or asset to be added to the amount of the merchandise on shipment, and the nominal portion would be carried as a charge to the Sales Account, or to the Shipment Sales Account if the latter is maintained. It will be noted that in this procedure, for the sake of brevity, the distinctive principle of a ledger account for each shipment is omitted. Reliance is had upon the account sales and other detached papers for information as to the outcome of the particular shipment.

For inventory purposes the unchecked items in the Shipments Book disclose the goods on shipment to be taken into stock. The amount would be charged to Inventory on Shipments, and credited to the Trading Account or Merchandise Account if the latter is maintained, the same as other inventory. On the Balance Sheet of the consignor, it would appear as Inventory upon Shipment.

The successful use of this alternative method depends almost entirely upon the correct handling of the memorandum records covering the shipments. The method first given would probably give the better results under ordinary circumstances.

Accounts Current.

Credit transactions involve, for the purpose of verification and agree ment, the exchange of written documents or statements, of which the invoice, bill, statement, and account sales, that have been sufficiently described in this and previous lectures, are types. Another common form heretofore referred to, and one that may be described conveniently at this juncture, is known as an **Account Current.**

An **Account Current** is usually a transcript of a ledger account, disclosing the charges that have been made to an individual, firm or corporation, for a certain period of time, and the credits that are proper offsets to such charges. The account is usually brought to a balance, which if a debit, measures the amount receivable on the account, and if a credit, the amount payable on the account. The term **open account** is often used as synonymous with **account current,** either describing a statement that discloses a series of charges and credits between two parties, that is still continuing.

An **Account Stated** is an account rendered to which the parties have expressly or impliedly agreed. To maintain an action upon an account stated, it has been held that it must appear that the account has been

balanced and rendered, with an assent on the part of the defendant, either express or implied, to the balance. The acceptance of an account rendered, without objection within a reasonable time, will render it an account stated, and it will not be necessary to prove the items that result in the balance. In the case of fraud or mistake, such an account may be impeached, but not otherwise. It will be seen from the foregoing that an account current, when it is agreed upon, becomes an account stated. This may come through lapse of time, without objection on the part of the one to whom the account is rendered, although the better and more usual course is to accept the account and thus make it an account stated beyond question.

In the absence of interest charges or allowances upon the items of an open account, the rendering of an Account Current amounts to nothing more than transcribing the debit and credit amounts and bringing down the resultant balance. In many lines of business, however, by express agreement or trade custom, the equities of the parties are conserved by the calculation of interest upon the debit and credit items that enter into an account current. Thus, if a factor, credited the account of his principal with the proceeds of the sales of various lots of merchandise during the month, but did not remit for the same until a subsequent date, the principal might be compensated for the loss of the use of the proceeds by interest calculated upon the various amounts from their respective dates to the subsequent date of settlement.

If a payment were made on account during the interval thus covered, the interest upon such payment, from its date to the subsequent time of settlement, would be deducted from the interest upon the credits to the account of the principal, to arrive at the net interest charge that should be made against the factor.

There are several ways in which the interest may be calculated. The method that has been indicated is to compute interest at the agreed rate upon each debit item from its date until the desired subsequent date, and upon each credit item from its date until the desired subsequent date. If the interest on the credit items is greater than the interest on the debit items, such excess is the net amount of interest to be credited to the account; if the interest on the debit items exceeds the interest on the credit items, such excess is the net amount of interest to be charged to the account.

In rendering the account, it is usual to provide two extra columns on the debit side, one to contain the number of days for which interest is to be calculated for the particular item, and the other to contain the amount of such interest. For the same purpose, two columns are added on the credit side.

The difference between the interest columns will indicate a net credit or charge on account of interest as the excess may be a credit or debit balance. The difference is carried to the interest column contra to balance, and is also carried to the regular debit money column, if a charge, or to the regular credit money column, if a credit. This is the method used in many lines of business, including stock brokerage.

The method will be readily apparent from the following illustration:

HENRY SMITH
in account with
Dr. *July*, 1902. CARLING & CO., Factors. *Cr.*

Date	Item	Amount	Time (d'ys)	Interest (6 %)	Date	Item	Amount	Time (d'ys)	Interest (6 %)
1902					1902				
July 23	To Cash.....	$2,000.00	8	$2.67	July 1	By Account Sales ...	$1,000.00	30	$5.00
" 30	" "	1,000.00	1	.17	" 10	" " " ...	2,500.00	21	8.75
July 31	*To Interest, 6%, contra*	.....	.....	14.41	" 13	" " " ...	500.00	18	1.50
" 31	*To Balance down*.....	1,814.41	.....	.....	" 16	" " " ...	800.00	15	2.00
					" 31	" Interest, net credit contra.....	14.41	.....	.....
		$4,814.41		$17.25			$4,814.41		$17.25
					1902 Aug. 1	By Balance.....	$1,814.41		

Another method of arriving at the net charge or credit on account of interest is to determine the balance of the account from day to day, and calculate the actual interest upon such balance for the time that it exists. This is particularly useful where the balance is a matter of continual interest, and is likely to remain either a debit or credit balance steadily. It makes no difference in the result, of course, whether interest be calculated on the total debit and credit items, and the difference taken, or whether the difference between the debits and credits be determined and the interest calculated thereon. The procedure will be clear from the treatment according to this method of the facts before given. It is as follows:

HENRY SMITH
in account with
July, 1902 CARLING & CO., Factors.

Date	Item	Dr.	Cr.	Balance	Days	Interest 6 %
1902				*Cr.*		*Cr.*
July 1	By Account Sales.....		$1,000.00	$1,000.00	9	$1.50
" 10	" " "	.....	2,500.00	3,500.00	3	1.75
" 13	" " "	.....	500.00	4,000.00	3	2.00
" 16	" " "	.....	800.00	4,800.00	7	5.60
" 23	To Cash.....	$2,000.00	.....	2,800.00	7	3.26
" 30	" "	1,000.00	.....	1,800.00	1	.30
" 31	By Interest, 6%.....	.....	14.41	.....	.....	$14.41
July 31	*To Balance*.....	1,814.41	.....	.....	.....	.....
		$4,814.41	$4,814.41	.....	.....	$14.41
Aug. 1	By Balance.....	.....	$1,814.41	$1,814.41	.....	.....

The rulings in bank ledgers proceed upon the plan of the last statement, in order that the balance of the account, which is a matter of vital interest, may be disclosed from day to day. In case of the allowance of interest upon a depositor's balance, the interest, in ordinary practice is not credited from day to day, but is calculated periodically, say once a month or once a quarter. Referring to the illustration, interest on $1,000 for 9 days would equal interest on $9,000 for one day. Multiplying by the number of days, the following is obtained:

9	x	$1,000	=	$9,000
3	x	3,500	=	10,500
3	x	4,000	=	12,000
7	x	4,800	=	33,600
7	x	2,800	=	19,600
1	x	1,800	=	1,800
	Total.....			$86,500

This is the amount, $86,500, upon which interest must be calculated for one day. Pointing off two places gives $865, interest at 6 per cent. for 60 days, and dividing by 60, to obtain interest for one day, gives the same result as obtained in the illustration, viz.: $14.41.

In practice the banks calculate on the even hundreds. This would take two places off each product, and off the total, so that the total could be divided by 60, or, still shorter, disregard the cipher on the 60, point off one place, and divide by 6. Taking the figures above, leaving off the two places, gives 865; pointing off one place, gives 86.5, and dividing by 6, gives result, $14.41.

In case the balances change frequently, the multiplication may be avoided by carrying out the balance for each day and adding to obtain the amount on which to calculate interest for one day. If the balance for 9 days is $1,000, the same result is obtained by carrying out the $1,000 nine times and adding, as by multiplying $1,000 by 9. This is the more usual course in case the balances are subject to frequent changes.

THEORY AND PRACTICE OF ACCOUNTS.

Applied Economics and Organization.

LECTURE VIII.

1. Define *consign, consignor, consignee, consignment, shipment, account sales, account current, account stated, joint adventure.*

2. How should inventory of merchandise on consignment be treated at time of closing: (a) on books of consignor, (b) on books of consignee? In closing books what treatment should be made of expenses paid on account of goods received on consignment not sold?

3. State and explain two methods of calculating interest on accounts current, and cite a case in which each can be used to the best advantage.

4–5. *Proposition.* James Blake began business January 2, 1912, with a cash capital of $30,000. The transactions for the two months' period ending February 29, 1912, were as under:

Purchases, for cash $13,000; on credit $12,000.

Consignments received: B. Brown, $2,000, 6% commission; D. Drake, $7,500, 6%; F. Ginzler, $6,700, 8%.

Shipments made: John Holland, $2,300, 4% commission; Walter Johnson, $4,900, 6%.

Sales were made as follows: Merchandise $27,000; Drake consignment $6,800; Brown consignment $2,900. Of the foregoing $16,700 was sold for cash and the balance on credit.

Account sales received from Walter Johnson showing: gross sales $5,000, freight charges $300, commission at agreed rate, inventory $2,450. (Freight charge covers entire shipment.)

J. Holland returned shipment with bill for miscellaneous charges paid by him in connection with the shipment, amounting to $25.

Account sales sent to B. Brown showing gross sales $2,900, less commission.

Cash receipts: from credit customers, $16,000; from Walter Johnson in full of account; account cash sales as noted above.

Cash discounts allowed customers, $240.

Cash payments: Account J. Holland shipment for freight, $210; paid creditors $7,200; expenses, $2,100; advance to D. Drake $4,000; B. Brown account consignment, in full; charges account E. Ginzler consignment $240.

Inventories as at February 29, 1912: Merchandise $9,000; Ginzler consignment (as received); W. Johnson shipment, per account sales; D. Drake consignment $2,300.

Submit the following: (a) entries to cover the foregoing transactions, (b) entries to close books as at February 29, 1912, (c) balance sheet as at February 29, 1912, (d) profit & loss account for two months' period ending February 29th.

SUPPLEMENTAL QUESTIONS.

1. How would you prove, by the use of the assets and liabilities, the result of an ordinary Profit and Loss Account?

2. State the objects and briefest method of carrying wages earned, but not due, into the accounts at the time of closing.

3. Describe the nature of the following accounts: suspense, impersonal, mixed, realization & liquidation.

THEORY AND PRACTICE OF ACCOUNTS.
APPLIED ECONOMICS AND ORGANIZATION.

BY HOMER ST. CLAIR PACE, C. P. A.

LECTURE IX.

THE LEDGER AND CONTROLLING ACCOUNTS.

Ledger Development.

The use of a single Ledger would, under usual conditions, be clumsy and unsatisfactory in a business large enough to justify the use of the modern columnar books of original entry that have been described in previous lectures. Therefore, it is necessary to consider more particularly the Ledger, its development, and its adaptation to the requirements of modern accounting in an undertaking of considerable size.

In a small business, where the accounts may be conveniently carried and handled in a single Ledger, it is usual and satisfactory to group the accounts in the Ledger into three divisions according to their nature, viz., Real Accounts, Nominal Accounts and Personal Accounts. Thus pages from 1 to 100 might be allotted to Real Accounts, from 101 to 200 to Nominal Accounts, and from 201 to 500 to Personal Accounts. The Personal Accounts should be subdivided into Accounts Receivable and Accounts Payable. The classification is often deviated from and the Capital and Drawing accounts of the proprietor, or partners, stated first, and the location of Nominal Accounts and Personal Accounts may be reversed.

The classification indicated is useful in posting and in referring to the accounts, as the nature of the account indicates approximately its location in the Ledger. It also permits of a convenient grouping of the accounts in the trial balance that is useful in studying the condition of the accounts, and in the preparation of statements.

When the volume of business is so large that the one Ledger is inadequate, additional ledgers are added, but the division of accounts as between the different ledgers does not ordinarily follow, as in the single Ledger, the classes of Ledger accounts. In the first stage of development beyond the single Ledger a division is made into three ledgers, as follows:

1. **Customers' Ledger,** or, as it is often called, **Sales Ledger,** designed to contain the accounts of those who are indebted to the undertaking, including, it may be, Bills Receivable.

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2. **Creditors' Ledger,** or, as it is often called, **Purchase Ledger,** designed to contain the accounts of those to whom the undertaking is indebted, including, it may be, Bills Payable.

3. **General Ledger,** designed to contain all of the accounts pertaining to the undertaking that do not fall within the scope of the Customers' Ledger or the Creditors' Ledger.

If the volume of business justifies it, there may be a still further division of the Customers' Ledger or the Creditors' Ledger, either alphabetically or geographically. Thus, the accounts receivable may be divided into two ledgers, one containing those accounts beginning with the letters from A to M, and the other those from N to Z; or, geographically, one ledger may contain accounts with city customers, the other, accounts with out-of-town customers.

It is often desirable that the financial position and earning capacity of the undertaking may not be common knowledge among the office employees, and to guard against such a contingency the General Ledger may be divided into a **Private Ledger,** containing the Real Accounts, Capital Account and the Profit & Loss Account, and a **General Ledger,** containing the other ledger accounts. The Private Ledger is usually in charge of the proprietor, a partner, a confidential clerk, or the firm's accountant. Instead of thus dividing the General Ledger, some firms prefer to treat the General Ledger itself as a private book, to be kept by one in the confidence of the management. The use of the Private Ledger will be more fully considered later.

While there may thus be three or more ledgers, it is evident that each contains but a part of the accounts which, to obtain a Trial Balance, must be considered as a whole, and which, in the small undertaking, are contained in a single Ledger.

The location of an error, in an attempt to arrive at a trial balance from the books of a business so small that the accounts can be handled conveniently in one ledger, is not a serious matter, but considerable labor is involved in checking over accounts numerous enough to justify the use of three or more ledgers.

The work is further complicated by the fact that, in the larger undertakings, several bookkeepers are employed on the accounts. Without special provision in the methods used, the error cannot be localized, in advance, to a particular ledger and assigned to the bookkeeper in charge thereof, but a general checking of the ledgers must be instituted.

To secure this localization of error in advance, and for other important reasons that will appear, **Controlling Accounts,** sometimes called **Adjustment Accounts** or **Summary Accounts,** have been devised.

Controlling Accounts.

In a system of accounts that embraces Controlling accounts, there is one Ledger, usually the General Ledger, that has within it all of the elements necessary to effect a Trial Balance.

Within it are not only the ordinary detailed accounts that fall within its scope, but in addition controlling or summary accounts that disclose, in summary form, by reason of monthly postings, the transactions that are posted in detail from day to day in subsidiary ledgers.

Thus, there may be a Customers' Controlling Account that discloses, by its balance, the total amount due from customers. The individual accounts with customers are kept in a Customers', or Sales, Ledger, and the debit balances in that ledger, in the aggregate, exactly equal the debit balance of the Customers' Controlling Account in the General Ledger.

Likewise, there may be a Creditors' Controlling Account, the credit balance of which exactly equals the total credits of the individual accounts with creditors in the Creditors', or Purchase, Ledger.

The manner of bringing this about is worthy of careful study, for the principle is one of great importance in the modern development of accounting. The principle will be illustrated with customers' and creditors' controlling accounts, although its application may be extended to the control of factory accounts by the general financial books, the control of the receipt and issue of stores, the control of departments and tax levies in municipal accounts, and, in fact, to innumerable conditions throughout accounting.

Customers' Controlling Account.

To open a Customers' Controlling Account in the General Ledger, after a trial balance is effected to insure accuracy, the sum of the debit balances of individual customers' accounts is charged to it, and the individual accounts are credited and thus closed out. This may be done by a Journal entry. The individual accounts are then opened in the Customers' Ledger, the Journal entry supplying the information in proved and convenient form. If it were the original opening of the books, the credit would be to Capital.

An illustrative skeleton Journal entry is as follows:

CUSTOMERS' CONTROLLING ACCOUNT To SUNDRIES

For opening of controlling account, and closing of individual customers' accounts, as under:

JOHN SMITH.....

ROBERT BROWN.....

MYRON BENSON & CO.....

ETC., ETC.....

The controlling account is usually brought to its true state by summary entries at month-ends, preferably passed through the Journal.

The sales, for example, are recorded from day to day in the Sales Book, and the charges are made to the individual customers' accounts in the Customers' Ledger, so that, in connection with entries posted from other books of original entry, the state of a customers' account may be determined at any time. The total sales for the month, as disclosed by the summation of the Total column in the Sales Book, is charged by Journal entry to Customers' Controlling Account, and credited to Sales Account, the credit being the same as would take place were no controlling account used. It will be clear that this amounts, in the General Ledger, to posting the total charges in one amount to a controlling, or summary, account, the individual debits having been made in a subsidiary ledger.

An illustrative entry is as follows:

CUSTOMERS' CONTROLLING ACCOUNT.....
To SALES.....

In case of returned sales, the procedure would be the inverse of that carried out to record the sale of the goods.

In the Cash Book, provision is made on the debit side for a Net Cash column, a Discount column, and a Customers' column, the latter, in case of a payment under discount, containing the total of the first two. Thus, upon receipt of $99 from a customer in payment of an account of $100 under one per cent. discount, the $99 is entered in the Net Cash column, the $1 in the Discount column, and the $100 in the Customers' column. The customer is immediately credited in his account in the Customers' Ledger with the $100. The totals of the Cash and Discount columns are available at the month-end for summary entries, Cash and Discount being charged and Customers' Controlling Account being credited.

An entry to illustrate the principle is as follows:

SUNDRIES To CUSTOMERS' CONTROLLING ACCOUNT
CASH.....
DISCOUNT.....

If a Bills Receivable Book is kept, the bills will be entered from day to day, and the accounts of the respective customers, from whom the bills are received, will be credited in the Customers' Ledger. At the end of the month, a summary entry is passed, charging Bills Receivable Account, kept in the General Ledger, and crediting Customers' Controlling Account, with the total of the notes received from customers during the month.

In case a Bills Receivable Book is not kept, the bills will be entered in the Journal. Bills Receivable account will be debited, and the cus-

tomers' account, kept in the Customers' Ledger, will be credited for each transaction. Therefore, for the summary entry at the end of the month, it will be necessary to determine the total amount of such entries from the Journal, and debit Bills Receivable account with it. The amount is ticked off without posting, it being noted that the entries have already been posted in detail to Bills Receivable Account. Customers' Controlling Account is credited to balance the amount of the debit.

The entry would be:

BILLS RECEIVABLE.....
To CUSTOMERS' CONTROLLING ACCOUNT

The Customers' Controlling Account would then disclose the transactions with customers in summary form. Assuming figures for the purpose of illustration, the procedure will be made clear from the following form of account:

Dr. CUSTOMERS' CONTROLLING ACCOUNT. Cr.

1902				1902			
Jan.	1	To Balance (total due from customers).....	$20,750	Jan.	31	By Cash & Discount (total for month)....	$17,100
"	31	To Sales (total for month).....	24,125	"	31	By Bills Receivable (total for month).....	900
				"	31	By Balance.....	26,875
			$44,875				$44,875
Feb.	1	To Balance (total due from Customers)....	$26,875				

It will be apparent, that, if the Customers' Ledger is properly opened, so that, at January 1, 1902, the debit balances of the accounts equal the balance shown in the Controlling Account, and the totals have been properly taken off, entered and posted, the combined balances of the customers' accounts must be brought to an absolute agreement with the Controlling Account. If an error, therefore, has been made in posting to a customer's account it is immediately localized by the failure of the Customers' Ledger to prove, and the searching of the remainder of the accounts for the error is avoided.

Creditors' Controlling Account.

The Creditors' Controlling Account is opened by a credit to it of the total amount due to creditors, as disclosed by the books when their accuracy is determined by a trial balance, and the individual creditors' accounts in the General Ledger are debited to close them. The individual accounts with the creditors are then opened in the Creditors' Ledger.

The information for this latter procedure may be obtained from the Journal entry if a Journal entry is used as, in many cases, is preferable.

The following entry illustrates the principle:

SUNDRIES To CREDITORS' CONTROLLING ACCOUNT

For opening of controlling account and closing of individual creditors' accounts, as under:

DAVIS & CO.....

JAMES BROS.....

B. G. SEARLE.....

ETC., ETC.....

It will be seen that this amounts to a consolidation of the accounts payable into one account in the General Ledger, and the opening of a subsidiary ledger for the individual accounts.

As in the case of the accounts with customers, if the total credits and the total debits thereafter entered in the individual accounts are carried to the respective credit and debit side of the Creditors' Controlling Account, its balance will equal the combined balances of the subsidiary ledger.

A record of the purchases will be kept in a Purchases Book, or similar record, from day to day, and from it the creditors will be credited with their respective amounts in the individual accounts maintained in the Creditors' Ledger.

From the Purchase Book the total purchases for the month may be ascertained at the month-end, and a summary entry passed in the Journal, charging Purchases, Plant, Expense, or such other accounts as may be indicated by the columnar arrangement of the Purchase Book, and crediting Creditors' Controlling Account.

The following entry illustrates the principle:

SUNDRIES To CREDITORS' CONTROLLING ACCOUNT

For purchases etc., for month of.....as under:

PURCHASES.....

EXPENSE.....

On the credit side of the Cash Book columns are provided for Net Cash, Discount, and Creditors, so that in case of a settlement of a claim for $200 under two per cent. discount, $196 is entered in the Net Cash column, $4 in the Discount column, and the $200, being the amount chargeable to the creditor in his account, is entered in the Creditors' column. The totals of these columns are available for a summary entry at the month-end, Creditors' Controlling Account being charged with the total charged

to the various creditors' accounts, as shown by the Creditors' column, and Cash Account and Discount Account being credited to balance ,thus:

CREDITORS' CONTROLLING ACCOUNT To SUNDRIES
DISCOUNT.....
CASH.....

If settlements were made with creditors by giving them Bills Payable, and such Bills Payable were debited to the proper creditors' accounts in the Creditors' Ledger, and credited to Bills Payable Account in the General Ledger, by Journal entries, it would be necessary at the month-end to pass a summary Journal entry, debiting Creditors' Controlling Account and crediting Bills payable (noting that the latter had already been posted), with the amount, posting only the former. If a Bills Payable book were maintained, the total credit on account of bills issued would be ascertained from this book, and would not have been posted during the month, as would be the case were the Journal method used.

The entry would be:

CREDITORS' CONTROLLING ACCOUNT.....
To BILLS PAYABLE .....

The amount of Returned Purchases would be debited, by a summary Journal entry, to Creditors' Controlling Account, and Purchases would be credited, thus:

CREDITORS' CONTROLLING ACCOUNT.....
To PURCHASES.....

In short, the procedure in the case of creditors' accounts is the inverse of that adopted in the case of customers' accounts.

The procedure will be more easily understood, perhaps, by a study of the following illustration, which is drawn up to conform to the principles and practice set forth:

Dr. CREDITORS' CONTROLLING ACCOUNT. Cr.

1902				1902			
Jan.	31	To Cash & Discount (total for month).....	$11,500	Jan.	1	By Balance (total due to Creditors).....	$10,800
"	31	To Bills Payable (total for month).....	800	"	31	By Purchases (total for month).....	12,000
"	31	To Returned Purchases (total for month)....	250				
"	31	To Balance.....	10,250				
			$22,800				$22,800
				Feb.	1	By Balance (total due Creditors).....	$10,250

The monthly entries may be made by postings direct to the Ledger accounts from the books of original entry, as is done by many bookkeepers, although there is more likelihood of errors, due to omissions, than in the case where the transactions are brought to an exact balance by Journal entries. It will also be found in many cases that a bookkeeper, who would be unable to understand and operate controlling accounts if it were necessary to pick up the entries in such a way, can carry out the procedure successfully if he is required to follow out *pro forma* entries, such as have been outlined.

In addition, the summary Journal entry is theoretically sound, because it restores to the Journal its function of a complete, although summary, record of the transactions. Practically, it is satisfactory to bring into the books a summary of the month's business that can be understood and grasped as a whole. It is not only useful to the accounting staff, but conveys a great deal of information to a proprietor first hand from the books, even without a technical knowledge on his part. It is found in many cases that this method of securing information appeals more to a proprietor than the inspection of prepared statements.

The Cash Book.

A thorough understanding of the Cash Book ruling that is necessary in the use of Controlling accounts, is essential at this juncture.

The ruling on the debit page of the Cash Book, beginning with the money column to the left and proceeding to the right, may be Net Cash, Discount, Customers, Creditors, Cash Sales, and General Ledger, thus:

Dr. CASH.

Date	Item	L. F.	Net Cash	Dis-count	Custom-ers	Credit-ors	Cash Sales	General Ledger

The initial cash balance and all cash receipts are entered in the Net Cash column.

In case of the settlement of an account by a customer by payment of cash under discount, the amount of cash is entered in the Net Cash column, the amount of discount in the Discount column, and the sum of the two,

which is the amount to be credited to the customer, is entered in the Customers' column.

The Creditors' column is provided to take care of the possible receipt of cash from a creditor, which might come about by the return of goods, or otherwise, and while the ruling should be provided, its use is comparatively infrequent. For the sake of simplicity no transactions of this kind were included in the illustrative Controlling account before given The procedure is to carry the amount of cash into the Net Cash column and extend the amount to the Creditors' column.

In the case of cash sales the amount is carried into the Net Cash column and extended to the Cash Sales column.

In the case of a cash receipt affecting a General Ledger account, as, for instance, the sale of Real Estate, the amount would be carried into the Net Cash column and extended to the General Ledger column.

The opening cash balance being carried to the General Ledger column, a proof of the accuracy of the distribution in the columns is effected by determining if the summation of the totals of the Net Cash and Discount columns equals the summation of the totals of the other columns.

Bearing in mind the various columns that have been indicated, the summary Journal entry covering the transactions, would be as follows:

SUNDRIES To SUNDRIES

For summary of cash receipts, for month of.....as under:

CASH For receipts (other than opening balance)....

DISCOUNT.....

CUSTOMERS' CONTROLLING ACCOUNT.....

CREDITORS' CONTROLLING ACCOUNT.....

SALES.....

GENERAL LEDGER ACCOUNTS (posted in detail).

The initial cash balance would have to be deducted from the total of the Net Cash column and the total of the General Ledger column, in order to arrive at the figures for the foregoing entry.

It will of course be understood that the General Ledger items will be posted from time to time, and that in the summary entry at the end of the month they are included to complete the entry, but are ticked off as being already posted.

On the credit side of the Cash Book the ruling, beginning with the money column to the left and proceeding to the right, providing that only

one column is required for Expense disbursements, may be Net Cash, Discount, Creditors, Customers, Expense, and General Ledger, thus:

CASH. Cr.

Date	Item	L. F.	Net Cash	Dis-count	Credit-ors	Custom-ers	Ex-pense	General Ledger

The procedure is the inverse of the debit page, and the *pro forma* Journal entry to cover the credit side of the Cash Book, is as follows:

SUNDRIES To SUNDRIES

For summary of cash payments for month of.....as under:

CREDITORS' CONTROLLING ACCOUNT.....

CUSTOMERS' CONTROLLING ACCOUNT.....

EXPENSE.....

GENERAL LEDGER ACCOUNTS (posted in detail)...

CASH For payments.....

DISCOUNT.....

The Customers' column is to take care of any possible payments of cash to customers through the return of merchandise, or otherwise.

The General Ledger total postings are included merely to complete the entry, the postings having been made from the Cash Book.

It will be noted that the difference between the Net Cash columns discloses the cash balance, or the overdraft, at any time, an essential of a satisfactory Cash Book.

The foregoing entries presuppose the keeping of a Ledger cash account, opened by the initial cash balance, and which, under the method shown, will disclose the cash receipts and payments by monthly summary entries.

The Advantages.

Assuming that there are but three ledgers in the books under consideration, General Ledger, Customers' Ledger, and Creditors' Ledger, it is evident that every element necessary to a Trial Balance is embraced within the General Ledger.

If the correct totals have been determined in the books of original entry, and correctly transferred to the Journal and posted to the Controlling accounts, and the balancing of the General Ledger effected thereby, the accuracy of the totals shown to be due from customers, and due to creditors, by the Controlling accounts, is fairly assured.

If the total amount due from customers, as shown by the schedule of accounts from the Customers' Ledger, does not agree with the Controlling Account balance, there is evidently an error in posting, abstracting balances, or in the preparation of the schedule. The same applies to the accounts in the Creditors' Ledger.

Therefore, the error, or errors, if there be more than one, are localized, or limited, to a known ledger or ledgers, and no time is lost in going over a large part of the work that is accurate. The localization of error is the great labor-saving principle of the Controlling Account.

It will be apparent that the person in charge of the accounts will have in his possession a key or check by which he may require subordinates to achieve a certain result.

Another advantage is that the General Ledger may be written up quickly, and statements, in rough, showing profit and loss and financial position, prepared, without waiting for the posting and balancing of the Customers' and Creditors' Ledgers. However, there is a chance of error in writing up the Controlling accounts, as for instance, wrong additions, or the placing of amounts in the wrong columns in the Cash Book, so that the work cannot be considered as proved until the subsidiary ledgers are in agreement with the Controlling Accounts.

Self-Balancing Ledgers.

If it is desired to make each ledger self-balancing, that is, to embrace within itself the elements necessary to a complete balance, it will be necessary to open in each subsidiary ledger a General Ledger Controlling Account, which will be a summary account in inverse form to the Controlling account of the subsidiary ledger in the General Ledger.

Thus, in the Customers' Ledger, the General Ledger Controlling Account would be **credited** with the total sales, debited with cash payments and discounts, and debited with returned sales and bills receivable.

Likewise, in the Creditors' Ledger a General Ledger Controlling Account would be established, **charging** it with the total purchases, and crediting it with cash payments, discounts, bills payable, and returned purchases.

This arrangement, carried out in the subsidiary ledgers, will provide the elements in each that are essential to a trial balance. This is some-

times desirable as a source of satisfaction to the ledger clerk, although, inasmuch as the chief bookkeeper has in the General Ledger a controlling account that supplies all the facts that would be contained in the controlling account in the subsidiary ledger, all of the advantages are secured, even if each subsidiary ledger is not made self-balancing.

In the case of the division of the General Ledger into Private Ledger and General Office Ledger, it is sometimes desirable to have in the General Ledger a Private Ledger Controlling Account, the mere balance of which will mean but little to the clerk in charge, but which will enable him to test the accuracy of the ledger by taking a trial balance, as will be explained later.

Private Ledger.

The **Private Ledger,** as has been pointed out, is a ledger in which are kept the accounts necessary to determine the financial position and earning capacity of an enterprise, and it is usually kept by someone in the confidence of the management in order that such information may not become the common knowledge of the office employees. A **Private Journal** is preferably used with the Private Ledger and is kept by the same person.

The accounts will include, as the book is often kept, the assets of the business, with the exception of accounts receivable and cash, and the liabilities of the business, with the exception of accounts payable. The items that are excepted are taken into the Private Ledger by means of a controlling account that measures the difference between such assets and liabilities. This difference is usually a debit, measuring the excess in amount of the cash and accounts receivable over the accounts payable. By means of this controlling account, in conjunction with the other assets and liabilities, the correct capital of the undertaking is shown in the Private Ledger.

The Private Ledger is opened by an entry in the Private Journal debiting in specific asset accounts the items of assets that would appear in the Private Ledger, such as Real Estate, Machinery, etc., and crediting in specific liability accounts the liabilities other than accounts Payable, for example, Mortgage Bonds Payable. In addition, the net debit or credit excess by reason of the difference between cash and accounts receivable on the one hand, and accounts payable, on the other, is carried into the entry. Thus, the entry necessary to open the Private Ledger might be as follows:

SUNDRIES To SUNDRIES

For assets and liabilities of Doe & Roe as at January 1, 1902, as under:

REAL ESTATE.....

MACHINERY.....

BILLS RECEIVABLE.....

INVENTORY OF MERCHANDISE.....

GENERAL LEDGER CONTROLLING ACCOUNT...

MORTGAGE BONDS PAYABLE.....

CAPITAL ACCOUNT.....

The General Ledger Controlling Account balance in the above is the difference between the assets and liabilities carried into the General Ledger, as under:

Accounts Receivable..... $

Cash.....

Total..... $

Less:

Accounts Payable.....

Balance, as shown by Controlling Account above..... $

In the General office books, an entry is passed in the Journal debiting the Accounts Receivable and Cash, and Crediting Accounts Payable and Private Ledger Controlling Account, thus:

SUNDRIES To SUNDRIES

For assets and liabilities carried in Private Ledger by Controlling Account, as under:

ACCOUNTS RECEIVABLE (in detail).....

CASH.....

ACCOUNTS PAYABLE.....

PRIVATE LEDGER CONTROLLING ACCOUNT

The General Ledger being opened on the above basis, the balance of the Private Ledger Controlling Account in the General Ledger will equal the balance of the General Ledger Controlling Account in the Private Ledger, and the two ledgers are thus articulated by the controlling account expedient. It will be observed that there is a ledger account maintained for each asset and liability, although each ledger contains but a part of such accounts.

If the business is large enough to justify it, a subsidiary ledger is opened for Accounts Receivable, and a subsidiary ledger for Accounts Payable, a controlling account being opened for each in the General Ledger along the lines that have heretofore been set forth.

It will aid in a clear understanding of the plan of the ledgers if the Private Ledger is considered as the real ledger, embracing in detail or summary form all of the accounts and controlling the General Ledger, which, in turn, controls subsidiary ledgers containing the accounts of customers and creditors.

In case of the installation of this method in a going business, the General Ledger previously used should be closed completely, and entirely new ledgers opened, in order that there will be no trace of the accounts that are to be treated as private.

Transactions During Accounting Period.

Transactions may take place during the accounting period, after the installation of the Private Ledger, that affect accounts in both the General Ledger and the Private Ledger. For example, real estate may be sold for cash, the treatment of which illustrates the procedure. This would be recorded in the general books by an entry debiting Cash, and crediting Private Ledger Controlling Account, and in the private books by an entry debiting General Ledger Controlling Account and crediting Real Estate. Entries of this nature would be comparatively rare, and could be taken into the private books by entries in the Private Journal at the end of each month.

As purchases are made, they are recorded in the usual way in the general office books, an account being opened in the General Ledger and charged with their amount. Sales are also handled in the General Ledger, an account being opened and credited with the amount thereof. In case a Merchandise account is used the charges for purchases and credits for sales will be made to it instead of to the separate Purchase and Sales accounts.

Nominal accounts are raised in the General Ledger to record the various classifications of expense, such as Wages, Salaries, Rent and Expense, and to record any item of profit that may be secured, and, under ordinary circumstances, the Private Ledger would not be affected thereby during the accounting period.

Entries at Time of Closing Books.

The first procedure at the time of closing the books is to have a trial balance of the General Ledger taken. The nominal accounts appearing

thereon are closed into the Private Ledger Controlling Account, preferably by a Journal entry. Thus, the amounts standing to the debit of such accounts as Purchases, Wages, Salaries, Rent and Expense, are charged to the Private Ledger Controlling Account, and the accounts are credited to balance. The accounts with credit balances measuring nominal elements, including sales, are closed by debit entries and their amount credited to the Private Ledger Controlling Account. This will bring the General Ledger to its original position, as far as classes of accounts are concerned, disclosing Accounts Receivable and Cash, on the one hand, and Accounts Payable on the other, the Private Ledger Controlling Account establishing the equilibrium. A Trial Balance should then be taken to prove the accuracy of the work.

The Trial Balance taken before the transfer of the nominal balances, and the one taken afterward, are supplied to the person in charge of the private books. The inventory of stock is ascertained, preferably by some one other than the clerk in charge of the General Ledger, if it is desirable to withhold from him the result as to profit and loss. Any other information necessary to the determination of profit and loss is obtained, and the closing of the books is carried out in the private books.

At this juncture it should be recalled that the Private Ledger contains all of the assets and liabilities in specific accounts, with the exception of the assets and liabilities carried in the General Ledger. It contains the net effect of the latter in a controlling account that, at the beginning of the accounting period, represented the true position. So far as entries concerning accounts carried in both ledgers are concerned, their effect has been carried in from month to month. But the effect of the nominal account in increasing and decreasing assets and liabilities in the General Ledger will not have been carried into the Private Ledger. Thus, if Sales amounted to $100,000, and Purchases and Expenses to $95,000, the effect upon the net asset value recorded in the General Ledger would be an increase of $5,000. It is, therefore, necessary at the end of the accounting period as a preliminary to the closing entries ,to bring the nominal accounts into the Private Ledger, setting them up in ordinary ledger accounts, and to carry their difference, or net effect, to the General Ledger Controlling Account. This is accomplished, preferably, by an entry in the Private Journal, thus:

SUNDRIES To SUNDRIES

For the raising of nominal accounts and adjustment of General Ledger Controlling Account, as under:

PURCHASES.....
WAGES.....
SALARIES.....
RENT.....
EXPENSE.....
GENERAL LEDGER CONTROLLING ACCOUNT.
SALES.....
DISCOUNT.....

From this point, the Private Ledger having been brought to an agreement with the General Ledger, and containing all of the nominal elements for the accounting period, the procedure is the same as in closing a set of books under ordinary conditions. The entries are passed through the Private Journal. A Trading Account is raised, to which the opening inventory, and the purchases, are charged, the latter being credited to balance. The sales and closing inventory are credited to the Trading Account, the Sales Account being debited to balance it, and the new inventory being set up by a charge to Inventory. The balance, measuring ordinarily a gross profit, is transferred to the Profit & Loss Account, and the Trading Account is closed. The nominal elements appearing in the nominal account, are then closed into the Profit & Loss Account, the amount of the expenses, being charged and the amount of the profits being credited, thereto, the nominal accounts being closed. The balance of the Profit & Loss Account, measuring the net profit or net loss for the period, is carried to the withdrawal accounts, if any, and the balances of the latter are carried to Capital, and measure the net increment or decrement of capital.

The Private Ledger, at this stage, will, as in the beginning, disclose all of the assets and liabilities, and the capital, of the enterprise, although the net asset value recorded in the General Ledger will appear only by the balance of the General Ledger Controlling Account.

If the foregoing method is carried out, the object of the Private Ledger will be fulfilled. Even the bookkeeper in charge of the General Ledger if the opening and closing inventories are withheld from him, cannot determine the outcome as to profit and loss. The bookkeeper in charge of the General Ledger, however, is usually more or less in the confidence of the management and, in fact, often has charge of both the General Ledger and the Private Ledger. Where this is true, the object of keeping the

Private Ledger is that the clerks other than the bookkeeper in charge of the General Ledger, who may have occasion or opportunity to consult the General Ledger, may not ascertain the confidential matters.

There are many variations of the method given. In case the confidential clerk has charge of both the General Ledger and the Private Ledger, the desired results may be obtained by keeping a Private Ledger with only such accounts as would readily disclose confidential information, such as the capital, Profit & Loss and withdrawal accounts. From the principles and full procedure given any of the other methods may be worked out, and, in fact, are but variations thereof, more or less complete, as the particular case requires.

THEORY AND PRACTICE OF ACCOUNTS.

Applied Economics and Organization.

LECTURE IX.

1. Define *ledger, private ledger, sales ledger, purchase ledger.*

2. In the opening of a ledger or ledgers, what principle should be followed as to the order of arrangement of the accounts? Show the advantages of different plans.—Questions from C. P. A. Examination.

3. What are controlling accounts? For what purposes are they employed and how are they conducted? Give three examples, with clear explanation of each.—Question from C. P. A. Examination.

4–5. *Proposition.* A received from B on January 31, 1902, goods on consignment inventoried at $9,200, and upon the receipt thereof paid expenses amounting to $320. He made advances on account as follows: February 6, 1902, $1,800, February 12, 1902, $2,200, February 19, 1902, $1,000. On February 28, 1902, he sold the goods for $14,450, upon which he was entitled to a commission of 10 per cent. He remitted on March 15, 1902, $7,000 on account. The balance was settled by A giving a note to B, dated March 31, 1902, due in 90 days without interest, the amount of which was arrived at by an interest adjustment on a 6 per cent. basis calculated on all items to the maturity of the note. Prepare a statement suitable for A to transmit to B with the note.

SUPPLEMENTAL QUESTIONS.

1. What books of a mercantile firm should be treated as books of original entry and be posted direct to the ledger?—Question from C. P. A. Examination.

2. Define and differentiate the following kinds of accounts: (a) *real* and *nominal,* (b) *personal* and *impersonal,* (c) *current* and *summary,* (d) *controlling* and *specific.*—Question from C. P. A. Examination.

3. Arrange a plan for keeping a private ledger with which the general ledger will agree and yet in no way reveal the contents of the private ledger. What matters are usually recorded in the private ledger?—Question from C. P. A. Examination.

Elementary Theory of Accounts.

By HOMER ST. CLAIR PACE, C. P. A.

LECTURE X.

ARITHMETICAL EXPEDIENTS.

Average Due Date.

It is often necessary, in the case of amounts falling due at various dates, to determine a date at which settlement can be made of the total, without prejudice, in the matter of the use of money, to the respective parties. Such a date is known as the **average due date,** or **equated time of payment.**

The most common procedure used in compensating for the use of the various amounts, but which does not give in itself the equated time of payment, would be to calculate interest upon each item to some common date at the agreed rate.

Thus, A advances to B the sum of $4,000, on dates and in amounts as under:

1902	
June 1	$1,000
June 15	2,000
June 30	1,000
Total	$4,000

It might be desirable on the succeeding 15th day of July to determine the amount then due A, allowing 6 per cent. interest upon his advances. The calculation may be made as follows:

Date	Amount		Time in days to July 15th		Amount on which to calculate interest for one day
1902					
June 1	$1,000	×	44	=	$44,000
June 15	2,000	×	30	=	60,000
June 30	1,000	×	15	=	15,000
	$4,000				$119,000

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The total 119,000 represents an amount of dollars upon which interest should be figured for one day. Pointing off two places gives the interest at the agreed rate, 6 per cent., for 60 days, $1,190. Dividing 1,190 by 60 (cutting off the cipher in each case and dividing by 6) gives a result of $19.83. Adding the $19.83 to the $4,000 advanced, makes the total due A on July 15th, $4,019.83.

It might, however, be desirable for B to give A a note for the sum of the advances, $4,000, with interest at the agreed rate, dated upon the average due date, in order to give the correct interest return to A.

For the purpose of determining such a date, reference should be made to the table before given, in which the proposition is reduced to the calculation of interest for one day upon $119,000. This may be stated inversely, viz., that one day's interest upon $119,000 is the same as interest upon $1.00 for 119,000 days. Thus, in order to give effect to the varying amounts and the time that each has to run, interest may be calculated upon $1.00 for 119,000 days. If $1.00 would run 119,000 days, $4,000 would run for as many days as 4,000 is contained in 119,000. The quotient is 29¾, or, say, 30, the number of days for which the interest runs on the whole amount of $4,000 **previous** to July 15th, or from June 15th, the average due date.

To prove the average due date, interest upon $4,000 for 30 days at 6 per cent. is $20.00, or, to be exact, using 29¾ days, $19.83, the same as was determined by the calculations upon the separate amounts.

Aside from the calculations, and their proof, that have been given, the equated date of payment is obviously June 15th, inasmuch as the first and last amounts are the same, and are equally distant in time, from the intervening amount. Charging interest upon the first advance, $1,000, for the month, would obviously produce the same result as charging interest upon the sum of the first and last advances, $2,000, for the half month beginning with June 15th.

In practice, it is necessary, owing to the more complicated conditions likely to exist, to determine, as shown, the required date by an arithmetical process that will give due weight to the various amounts that enter into the total, and the time that each has to run. It is always necessary to select, arbitrarily, a date, to which, or from which, the time in days is calculated in respect to each item. The variations will give the weight as to time that each has to run, and the weight as to amounts is obtained by multiplying the number of days in each case by the amount of each item.

It is found convenient to select as a basic date one of the dates in the series, to save a calculation, preferably the first or the last of the dates

given. Working the proposition on this basis, and selecting June 1st, the results are as follows:

Date 1902	Amount		Days from June 1st		Products
June 1	$1,000	×	0	=	0
June 15	2,000	×	14	=	28,000
June 30	1,000	×	29	=	29,000
	$4,000				57,000

Dividing 57,000 by 4,000, the quotient is 14, approximately. In this case, having selected a prior date, the number must be **added** to the basic date, instead of **subtracted.** Adding 14 days to June 1st, the same result as before is obtained, June 15th.

Another and more complicated example will be given, the dates and amounts being as under:

1902	
Sept. 9	$650
Oct. 6	500
Oct. 9	250
Nov. 1	300
Total	$1,700

The last date is used as the basic date, to show the procedure when the last date is selected, and the days and products are:

Date 1902	Amount		Days to November 1st		Products
Sept. 9	$650	×	53	=	34,450
Oct. 6	500	×	26	=	13,000
Oct. 9	250	×	23	=	5,750
Nov. 1	300	×	0	=	0
	$1,700				53,200

Dividing 53,200 by 1,700, the result is approximately 31, and 31 days **previous** to November 1st, the basic date, would be October 1st, the average due date.

This result may be proved by calculating interest to any desired date, upon the various items for the time each has to run, and upon the entire amount from the average due date. For the proof, interest will be calculated at 6 per cent. to November 1st, upon each item, thus:

$650	53 days	@	6%	=	$5.74
500	26 days	@	6%	=	2.17
250	23 days	@	6%	=	.96
300	0 days	@	6%	=	0
$1,700					$8.87
$1,700	31⅓ days (adding ⅓ necessary to give absolute check)				$8.87

If one of the dates other than the first or last is chosen, the difference between the products previous to the date, and subsequent to the date, chosen, must be used as the dividend, and the days calculated toward the greater weight of products.

Thus, in the calculation, if the third date, October 9th, had been chosen as the basic date, the results would have been as under:

$650	×	30	=	19,500
500	×	3	=	1,500
250	×	0	=	0
		Total.....		21,000
300	×	23	=	6,900
$1,700				14,100

Dividing the difference of the products, 14,100 by 1,700, the result is approximately 8, and as the greater weight of products is previous to that date, it is necessary to count backward eight days from October 9th, to find the average due date, which, as before, is found to be October 1st.

Illustrations have now been given in which a first, last, and intervening date, and a date entirely outside of the dates of the money items, have been used as a basis, and the average due date obtained has been proved in each case by interest calculations.

There are other methods of calculating the equated time of payment, based upon interest calculations, but the method given is sufficiently brief, and is easily understood and applied.

A method that is found convenient when the account extends over a long period, and when months intervene between the items, is based upon calculations of interest at the rate of one per cent. per month. This rate is selected because of the convenience in calculation—any other rate would give the same mathematical result. The interest on each amount is calculated from a convenient date, say the first of the month in which the first amount appears, to the date of the respective item,

at the rate of one per cent. per month. The total of such interest is then found. The items of principal are then totaled and one per cent., or a month's interest, is determined by pointing off two places. Dividing this by 30 gives the interest on the total amount for one day. If the amount arrived at from interest calculations be divided by the amount that represents the interest on the total of principal for one day, the quotient will be a number that will indicate the number of days between the basic date and the due date. Applying this to the foregoing example, the following result is obtained:

Date	Amount	Time from September 1	Interest
Sept. 9.....	$650	8 days	$1.73
Oct. 6.....	500	1 month 5 days	5.83
Oct. 9.....	250	1 month 8 days	3.17
Nov. 1.....	300	2 months 1 day	6.10
	$1,700		$16.83

Placing the point in the 1,700 gives a result of $17.00, interest for one month at one per cent. on the total amount. Dividing this by 30, the number of days in the month, gives approximately .57, the amount of interest on the total amount of principal for one day. Dividing the interest as above, $16.83, by the foregoing quotient, .57, gives a quotient of 30. Calculating 30 from the basic date selected, September 1, gives the average due date as October 1, the same as was obtained by the other method.

Averaging Accounts.

In a previous Lecture, an Account Current was stated which is reproduced here in running form. The facts were as under:

HENRY SMITH

IN ACCOUNT WITH

July, 1902. CARLING & CO., Factors.

Dr.

Date	Item	Amount	Time (days)	Interest 6%
1902				
July 23	To Cash.....	$2,000.00	8	$2.67
July 30	To Cash.....	1,000.00	1	.17
July 31	To Interest, 6%, contra.....	0	..	14.41
July 31	*To Balance down*.....	1,814.41	..	0
		$4,814.41	..	$17.25

Cr.

Date	Item	Amount	Time (days)	Interest 6%
1902				
July 1	By Account Sales.....	$1,000.00	30	$5.00
July 10	By Account Sales.....	2,500.00	21	8.75
July 13	By Account Sales.....	500.00	18	1.50
July 16	By Account Sales.....	800.00	15	2.00
July 31	By Interest, *net credit contra*.....	14.41	..	0
		$4,814.41	..	$17.25
1902				
Aug. 1	By Balance.....	$1,814.41		

Assuming that the amounts to the credit of Henry Smith were payable at the dates named, and that the debits were proper offsets at their respective dates, the date is required at which it would be equitable for Carling & Co. to date their note, bearing interest, in settlement of the balance of the principal of the account, $1,800, instead of reaching a settlement on the basis of the Account Current.

It is necessary to determine the products of the sides from or to a common date, the same as if the average due date of each side were being determined. Proceeding in this way to the last date named, July 30, the results are:

Credits:					
$1,000	×	29	=	29,000	
2,500	×	20	=	50,000	
500	×	17	=	8,500	
800	×	14	=	11,200	98,700
Debits:					
$2,000	×	7	=	14,000	
1,000	×	0	=	0	14,000
Excess of credits.....					84,700

Dividing the excess of products, 84,700 by the balance of the account, 1,800, gives, as a result, 47. That is, analyzing the process, Henry Smith is entitled to the use of $1.00 for 98,700 days, and, as an offset, Carling & Co. is entitled to the use of $1.00 for 14,000 days, the excess in favor of Henry Smith being the use of $1.00 for 84,700 days. Inasmuch as $1,800 is due Henry Smith on account, he will be entitled to the use of $1,800

for as many days as 1,800 is contained in 84,700, or 47. The time must be calculated backward, so that, it may be determined that 47 days previous to July 30 is June 13, giving the date from which interest must be computed on $1,800.

In the Account Current, interest is calculated to July 31, so, in computing interest as a check upon the accuracy of the due date, one day must be added to the 47 days, making 48 days. The calculation of interest at 6 per cent. upon $1,800 from June 13th to July 31st, 48 days, is made by pointing off two places to obtain interest for 60 days, $18, and taking away one-fifth, for the 12 days by which 60 exceeds the actual 48 days, $3.60, leaving $14.40. This result is within one cent of the amount achieved in the Account Current by figuring the interest on the debit and credit items, and deducting the interest upon debit items from the interest upon credit items.

Other dates may be selected as a basis, but the method given, has, perhaps, the fewest complications.

An understanding of the reason for the processes is much more essential than memorizing a formula. The latter is likely to be forgotten, but a knowledge of the principle will remain and may be of use in a situation that the process does not cover.

Determination of Time in Calculating Interest

A detailed consideration of the methods of calculating interest is not within the scope of this Lecture. It is thought desirable, however, to consider several phases of the subject, particularly in relation to the computation of time.

The ordinary commercial method of calculating time is to assume that there are 360 days in a year, that may be divided into 12 parts of 30 days each, corresponding, although not exactly, to the 12 calendar months of the year. The exact days are counted, and, for example, may be found to be 75. Dividing 75 by 30, a result of $2\frac{1}{2}$ is obtained, indicating that the interest must be calculated for two months and 15 days. For this time $2\frac{1}{2}$ twelfths, or 5-24, of the yearly rate, must be taken.

This method answers well enough for short-time periods, although carried to its logical conclusion, by counting all the days for a year 365, and dividing by 30, a result of $12\frac{1}{6}$ is obtained, so that in a year the inaccuracy amounts to $\frac{1}{6}$ of a month, or five days. That is, 365-360 of the rate is charged, amounting to an excess of 5-360, or 1-72.

It has been held that such excess, growing out of the method of calculating interest, when it brings the actual interest collected above the legal rate, does not constitute usury.

In case an amount is payable in a month, the due date falls on the same date of the succeeding month, irrespective of the number of days elapsed. A note dated on January 31, payable in a month, would fall due on the last day of February. The calendar months are recognized in this way. In fact, it is not at all uncommon for interest to be calculated upon the basis of calendar months, each to take 1-12 of the rate, and the remaining days are taken as their fractional part of a 360-day year. Thus, interest is to be calculated from June 10th to September 15th. The time from June 10th to September 10th is taken as three months, and for the time from September 10th to the 15th, there must be added 5 days, making the total time 3 months and 5 days. Had the first method been followed, the result would have been:

Days in June	20
Days in July	31
Days in August	31
Days in September	15
Total	97

Dividing the 97 by 30 would give 3 months, 7 days, a difference of 2 days.

The two methods may thus work different results, depending upon the variations in the number of days in the calendar months. For long periods of time, approaching a full year, the last method gives more nearly the correct result. The discrepancies in each, in the commercial view, are compensated by the ease of calculation obtained in the 360-day method.

The time in obtaining exact interest is determined by taking the actual number of days, and calculating the same proportion of the rate as the number of days bears to the 365 days of the year. Thus, in the case of interest running for 75 days, 75-365 of the rate would be used instead of 75-360, thus avoiding the error of 1-72, as pointed out in the 360-day method. This method, used by the Government, is known as the 365-day method, and is rarely used in business.

In either method, in determining the number of days between two dates, one is **included** and one is **excluded.** In New York, the date **from which** the time runs is excluded, giving the effect of the exclusion of one day. Thus, in the case of a loan running **from** June 15th and payable July 10th, the count could be made conveniently by deducting 15 from 30, the number of days in June, which leaves 15. Deducting, in a month, one number from another, includes one of the numbers and excludes the other. To the 15 must be added the total number in July, 10, because the exclusion

has been made in June, giving 25 as the number of days for which interest should be calculated.

Custom usually determines the method. It is incumbent upon the accountant to know the various methods of computing time, and the effect of each, although it is not often his province to insist upon a change in method that will produce a more nearly correct result when such a change is opposed to accepted commercial usage.

Sixty-Day Method.

There are many methods of calculating interest in use. One of the best for ordinary purposes is the 60-day method, that has been used in illustrative calculations. It proceeds upon the basis of the 360-day year and the six per cent. rate. That is, one-sixth of the rate, or 1 per cent., is applicable to one-sixth of the time, 60 days, or two months. Inasmuch as 1 per cent. may be found by pointing off two places in the principal sum, the interest on the amount in question for 60 days at 6 per cent. is obtained by placing a point. If the days are greater or less, an amount in proportion is respectively added or subtracted. The sum is then reduced to the actual rate should it vary from 6 per cent., that is, if the rate is 5 per cent., one-sixth of the amount is deducted.

THEORY AND PRACTICE OF ACCOUNTS.

Applied Economics and Organization.

LECTURE X.

1. Define and explain *equated date of payment, 60-day method.*

2. Give a rule for determining the average due date of a number of debit and credit amounts of different dates.

3. What is the equated time of payment of the following advances: February 15, 1902, $500; March 15, 1902, $275; April 6, 1902, $250; April 15, 1902, $450. Submit interest proof of your answer.

4–5. *Proposition.* Robert Adams and William Stevens are equal partners. On the night of July 3, their stock and fixtures were destroyed by fire. A trial balance which Adams had at his home showed the following condition of the ledger at the close of business June 30:

Robert Adams	$600	$7,450
William Stevens	600	7,450
Cash	3,309	
Fixtures	1,500	
Merchandise purchases	32,600	
Merchandise sales		24,800
Notes receivable	1,000	
Notes payable		2,000
Interest	120	50
Expense	780	
Customers	4,500	
Creditors		3,259
	$45,009	$45,009

The property is fully covered by insurance. The insurance company, for the purpose of estimating the value of the merchandise destroyed, has agreed to allow 35% as the average gross gain on the sales and to pay 66⅔% on the value of the fixtures as shown by the ledger.

On the basis of this agreement, state the result of the business and the capital of each partner.—Question from C. P. A. Examination.

SUPPLEMENTAL QUESTIONS.

1. Define *contingent liability.* How may it be shown on bills discounted in books of account.

2. In a certain business the cash receipts are employed in part to defray expenses. Other disbursements are by check against funds deposited. In arranging books of account for such a business, how would you provide a clear, direct and labor-saving record of all cash receipts and disbursements?—Question from C. P. A. Examination.

3. In closing a set of books how would you treat the following on ledger and financial statement:

(a) Depreciation on machinery (reserve), (b) Expenses prepaid, (c) Discount on customers' accounts (reserve), (d) Salaries and wages accrued.—Question from C. P. A. Examination.

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